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A GUIDE FOR ACCREDITED VETERINARIANS

Agricultural Research Service
UNITED STATES DEPARTMENT OF AGRICULTURE

USE PESTICIDES AND DISINFECTANTS SAFELY

If you use pesticides and disinfectants, apply them only when needed and handle them with care. Follow the directions and heed all precautions on the container label. If pesticides are handled, applied, or disposed of improperly, they may be injurious to humans, domestic animals, desirable plants, honey bees and other pollinating insects, fish, and wildlife, and may contaminate water supplies.

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PREFACE

Animal diseases cost livestock growers and the American economy an estimated 1 billion dollars a year. Much of this is preventable. But the manner of disease spread is complex. If this burden ever is to be relieved, it will be only as a consequence of the cooperative efforts of the veterinary profession.

Veterinary competence begins in college. It progresses through practice and training. For many years Federal regulatory agencies have relied on the ability and integrity of accredited veterinarians in the cooperative control and eradication of livestock diseases. Most State and Federal regulations evidence this reliance by specifying that certain livestock movements may be made when certified by a full-time State or Federal veterinarian, or an accredited veterinarian. The propulsion of mankind into the jet-age, with foreign animal diseases only hours away, has accentuated dependence and cooperative needs.

Accredited veterinarians who are privileged to cooperate with the regulatory divisions in disease control programs are not only protecting the livestock industry of the Nation, but adding to the well-being of mankind. This is a responsibility neither lightly given nor assumed.

Graduate veterinarians who are interested in becoming accredited should contact the State Veterinarian or the Federal Veterinarian in Charge of disease control and eradication activities of the State in which accreditation is desired. Because accreditation in one State is not valid in another, an applicant wishing accreditation should contact the officials in each respective State.

CONTENTS

	Page
Anaplasmosis	5
Anthrax	5
Bluetongue	6
Brucellosis eradication	7
Cattle tick fever	10
Dourine	11
Equine babesiasis	11
Equine viral encephalitis	12
Foreign animal diseases	12
Hog cholera	12
Laboratory animals	13
Leptospirosis	14
Leukosis	14
Mastitis	15
Mucosal disease and other similar infectious diseases	15
Poultry diseases	15
Salmonellosis	16
Scabies	16
Scrapie	17
Screwworms	18
Trichinosis	19
Tuberculosis eradication	19
Interstate and intrastate movement of livestock	23
Diagnostic laboratory services	24
Cleaning and disinfecting	30
Importation of byproducts	31
Import--animals, animal semen, poultry, and hatching eggs	32
Export byproducts	34
Export animals	35
Organisms and vectors	37
Standards for accredited veterinarians and rules of practice	39

The Animal Health (ANH) Division is responsible at the Federal level for the formulation and administration of cooperative State-Federal programs for the control and eradication of animal diseases.

The responsibility for protecting the health of the Nation's livestock encompasses activities that include full-scale eradication programs, more limited activities in certain diseases, epidemiological surveys, laboratory and field diagnostic services, and a continuing interest in all animal diseases, domestic as well as foreign, that pose a threat to the Nation's animal food supply.

This is a summary of some of those activities.

ANAPLASMOSIS

As an infectious disease of cattle, anaplasmosis comes under Federal laws and regulations that prohibit the interstate movement of diseased animals. Some States also have requirements that pertain to anaplasmosis; therefore, it is necessary that accredited veterinarians check not only the Federal requirements, but also the requirements of the State of destination prior to issuing interstate health certificates.

There are a number of useful tools in diagnosing and handling anaplasmosis--the complement-fixation (CF) test, the capillary tube agglutination test, a killed vaccine, direct blood smear examinations, antibiotic treatments, vector control, sanitation, and others. Many infected herds have been freed of the disease by the judicious use of test and segregation. The State of Hawaii has completed the eradication of anaplasmosis through a test and disposal program and now maintains its anaplasmosis-free status through the rigid testing of imports. Other States offer assistance in establishing anaplasmosis-free herds.

The Division, in cooperation with State animal disease control officials and cooperating livestock producers, has conducted surveys and field studies to determine the distribution and incidence of anaplasmosis. Complement-fixation testing services are provided by the Division's Technical Services Laboratory ARS, USDA, at Agricultural Research Center, Beltsville, Md., 20705 as well as at State-Federal cooperative laboratories in many States. The Division also trains serologists from cooperating laboratories in conducting the test.

ANTHRAX

Anthrax is a threat to the livestock industry of the United States, both from indigenous and foreign sources. Many States have specific regulations concerning the manner in which anthrax outbreaks should be handled. The outbreaks should be reported to State animal health officials.

When an indigenous source is involved, the usual situation is that cattle are pastured on an area in which there has been previous flooding and a kill of vegetation in which the grass has taken on a brownish tinge. The flooding is followed by a period of drought. An alkaline or neutral soil or water source contributes. Anthrax outbreaks occurring on such pastures may be handled by moving the cattle from the pasture to another that does not have the same contributing environmental conditions. The surviving animals should be vaccinated. The carcasses of animals that have died of the disease should be buried deeply or burned on the spot. When anthrax is suspected, carcasses should not be opened for postmortem examination.

For laboratory confirmation of deaths caused by anthrax, a superficial vein is opened and a specimen prepared by soaking a swab or a 2- to 3-inch piece of sterile umbilical tape with the blood. The amount of blood should be small to allow quick drying. The specimen is dried in an open sterile screwcap test tube. The tube is then closed and placed in a double mailer, the inside container of which must be metal. The specimens may be sent by registered airmail to the National Animal Disease Laboratory, Ames, Iowa, after clearance from the Veterinarian In Charge, or a local diagnostic laboratory may be able to perform the necessary bacteriology, animal inoculation, and phage typing. An excellent reference on the laboratory diagnosis of anthrax will be found in the Proceedings of the U.S. Livestock Sanitary Association, 63d Annual Meeting, San Francisco (1959):399-405.

When anthrax outbreaks in animals have occurred in relation to imported animal byproducts, they have usually been associated with contaminated nonsterile bonemeal mixed in animal feeds. Federal regulations covering the importation of bonemeal specify that the product must be prepared by heating the bone under a minimum of 20 pounds' steam pressure for at least 1 hour at a temperature of not less than 250° F. The product must be free from pieces of bone, hide, flesh, and sinew, and contain no more than traces of hair and wool.

In all outbreaks of anthrax, an effort should be made to discover the source of the infection. If contaminated feed is involved, an early determination of this fact may head off additional outbreaks.

The accredited veterinarian has a unique opportunity to provide authentic information concerning the hazards of anthrax and can help to alleviate the hysteria that sometimes accompanies anthrax outbreaks. Familiarity with the ecologic conditions which may lead to an outbreak of anthrax will permit the accredited veterinarian to recommend anthrax vaccination, thereby heading off potential anthrax losses. The veterinarian should be thoroughly familiar with any local or State regulations concerning vaccination for anthrax.

BLUETONGUE

Bluetongue is an infectious, but noncontagious, disease of ruminants occurring principally in sheep. The first isolation of bluetongue virus in the United States was made in California in 1952; however, the disease was thought to exist in Texas as early as 1948, where it was known as "soremuzzle." Since 1952, bluetongue has been reported in sheep from 18 States: Arizona, California, Colorado, Idaho, Indiana, Kansas, Missouri, Montana, Nebraska, Navada, New Mexico, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. Virus isolations have been made from cattle in California, Colorado, Florida, Idaho, Minnesota, Montana, Oregon, Texas, Utah, and Wyoming. Bluetongue virus has also been isolated from white-tailed deer and bighorn sheep in Texas.

A number of immunological types of bluetongue virus have been isolated from sheep and cattle in field outbreaks. A plurality of bluetongue virus strains is now apparently present in the United States. The principal insect vector in this country is believed to be culicoides variipennis.

The signs of bluetongue in sheep consist of temperature rise, depression, nasal discharge and salivation, edema of the lips and head, hyperemia and cynosis of the buccal mucosa, followed by ulceration and necrosis, and laminitis. In cattle the disease may be an inapparent infection or produce signs as severe as those observed in sheep.

When bluetongue is suspected, animal health officials should be notified. They will make arrangements with the Animal Disease and Parasite Research Laboratory, Denver, Colo., for inoculation and serological tests. This test is made with blood collected from animals in the early stages of the disease--preferably those with high temperatures.

Control measures include vaccination in areas where the disease is endemic and protection against the insect vector.

BRUCELLOSIS ERADICATION

The Program

The eradication of brucellosis from all species of domestic livestock is a cooperative program between the States and the Federal Government, conducted under the laws and regulations of the individual States. The Federal Government cooperates with the States through memorandums of understanding under authority of specific Federal laws relating to animal diseases. The Uniform Methods and Rules, Brucellosis Eradication, are used as a guide and constitute a recommended evolving program that will lead to total eradication of brucellosis from the entire Nation. The Uniform Methods and Rules are adopted by the United States Animal Health Association[1] (USAHA) and approved by the Agricultural Research Service, United States Department of Agriculture. Amendments to the Uniform Methods and Rules are considered by the USAHA at the annual meetings.

Interstate Movement of Animals as Related to the Brucellosis Program

The Division has primary responsibility for the control of interstate movements of animals. Federal regulations, promulgated by the Department, set forth the provisions under which animals may be transported interstate. The regulations are promulgated under the authority of the basic Federal laws concerned with animal disease control and eradication activities. These laws also provide the Department with authority to contract for the services of accredited veterinarians to assist in the brucellosis eradication program.

Accredited veterinarians should be familiar with the Federal regulations pertinent to the brucellosis eradication program whether or not they participate directly. As a service to their clients, most of them will be issuing official documents and performing other services required by the regulations.

Specific Federal Regulations Related to the Program

Applicable regulations will be found in the Code of Federal Regulations (CFR), Title 9, Chapter I, Subchapter B, Part 51, and Subchapter C, Parts 71 and 78.

Part 51 sets forth the provisions under which indemnities will be paid for animals destroyed because of brucellosis, as well as some other diseases.

Part 71 includes general provisions for interstate transportation of animals, including instructions for cleaning and disinfecting vehicles, yards, premises, and such, and the permitted disinfectants to be used.

Part 78 is specifically related to brucellosis, setting forth in detail the provisions under which animals may or may not be moved interstate.

Amendments to the Federal Regulations

Federal regulations are amended at frequent intervals as the need arises. Amendments appear in the Federal Register, published by the Office of the Federal Register, National Archives and Records Service, General Services Administration. The Register is distributed by the Superintendent of Documents, United States Government Printing Office, Washington, D.C. 20402. Copies of the regulations and recent amendments are available from the Veterinarian in Charge, Animal Health Division, in the various States.

[1] Formerly The United States Livestock Sanitary Association.

Specifically Approved Market--Certified Areas

Part 78 is particularly important in that it lists livestock markets and packing plants that are specifically approved to receive animals moving interstate under provisions of the brucellosis regulation. Also, it lists the states and counties that have achieved status as Modified Certified Brucellosis Areas under the Cooperative State-Federal Brucellosis Eradication Program. Animals from such areas enjoy special privileges in interstate movements as opposed to those from areas that have not yet attained this status.

History of Brucellosis Eradication

The Cooperative State-Federal Brucellosis Eradication Program began in 1934 as a drought relief program. Most States participated from the start. At that time the program was based on the blood-serum agglutination test of cattle, with elimination of reactors. By this method alone, the animal infection rate was reduced in participating areas from 11.5 percent in 1935 to 2.5 percent in 1939. Since that time research and field trials have provided a number of additional measures that have proved to be effective in the eradication program.

Strain 19 Vaccine--Department of Agriculture scientists developed Strain 19 vaccine to be used against brucellosis. The vaccine was introduced into the official program in 1941 and has proved a valuable adjunct to the other procedures included in the program. Research trials over the years and extensive field surveys have established the efficacy of the vaccine. Approximately 65 percent fewer cattle will be infected among vaccinated populations than among nonvaccinated populations under known conditions of average exposure. The merits of the vaccine have been proved, but its limitations in relation to the total eradication program must be kept in mind. The incidence of brucellosis has now been reduced in most areas to a level at which it is unnecessary to continue the use of vaccine. In fact, in such areas, the continued use of vaccine will only serve to mask the little remaining infection and delay eradication of the disease.

Vaccination of calves should not be practiced in Certified Brucellosis-Free Areas and should be discontinued in Modified Certified States except under unusual conditions. In other areas with a high incidence of the disease, extensive vaccination is recommended; but, as the incidence is reduced vaccination is reduced and finally eliminated. When vaccination is practiced, the vaccine should be administered as soon as practical after female calves attain 3 months of age, but before they reach 8 months of age for dairy breeds, and 10 months of age for beef breeds.

Milk Ring Test.--In 1952 the milk ring test was approved and became a vital phase of the brucellosis eradication program. All commercial dairy herds in the United States are screened three to four times annually by this method. Eradication efforts are concentrated in those that are suspicious to the test. A suspicious ring reaction is presumptive evidence of Brucella infection and is followed by a herd blood test. The test is remarkably specific; less than one-half of 1 percent suspicious tests is now common in many States. Thus, more than 99 percent of the blood testing of dairy herds that would otherwise be necessary has been eliminated in these States. As time permits, those few herds that are persistently suspicious to the milk ring test but do not reveal blood test reactors are the object of further investigations as to the cause.

Market Cattle Tests.--Another effective screening program utilized in brucellosis eradication is the market cattle testing program. Introduced in 1958, this procedure involves the testing, at market centers and packing plants, of identified cows that are not adequately screened by the brucellosis milk ring test (BRT). The reactor animals are traced to herds of origin, and the complete herd is placed on an individual animal testing program. The market cattle testing program is contributing materially to the brucellosis eradication effort in most sections of the country. The procedure is being expanded to include swine. Its universal adoption is anticipated since this will provide the frequency of screening necessary to disclose the majority of the outbreaks of brucellosis in beef cattle and thereby help assure eradication. In addition, the continuation of the milk ring test and the market cattle testing program in those areas already free of brucellosis will provide a relatively inexpensive surveillance program.

Epidemiological Investigations--As the goal of eradication is approached, it has become evident that special epidemiological methods (utilizing supplemental testing procedures) would be necessary in problem herds in order to remove the last vestiges of infection. Trained epidemiologists are available in most States to conduct such work, utilizing all of the known special methods and procedures as an aid in conducting a complete epidemiological investigation in the very limited number of remaining problem herds.

Eradication, the Goal

The importance of carrying out the above-mentioned procedures on an area basis cannot be overemphasized. The goal of area, State, and nationwide certification can be attained only when recommended procedures are uniformly applied to all herds within all areas. The certification of areas is an important step in the overall program to eradicate brucellosis. Without organized area effort and the wholehearted participation of all herd owners, veterinarians, and others participating in the program, gains already made will be difficult to maintain, and the goal of eradication of brucellosis will be delayed.

Participation of Accredited Veterinarians

Many accredited veterinarians will be participating in some part of the brucellosis eradication program before its completion. They will perform the following services:

- Provide herd owners and other interested parties with facts concerning the brucellosis eradication program and about the disease itself.
- Obtain blood samples and otherwise perform professional services promptly when requested by owners and authorized by officials.
- Prepare in detail and submit test record charts, including identification of animals, estimated age, pertinent history, vaccination record, and other information required.
- Promptly tag, brand, and appraise all reactors as authorized. Indemnity claims constitute a legal and binding contract when approved, and the importance of accurate and full information cannot be overemphasized.
- Instruct owners of infected animals as to isolation and proper disposal of reactors, quarantine, shipping permits, cleaning and disinfection of premises and equipment, indemnity claims, and management practices to prevent recurrence of the disease.
- Retest infected herds promptly as authorized by program officials. The owner's initial investment in disease eradication may be lost by an unduly delayed retest.
- Where vaccination is authorized, maintain stocks of Strain 19 vaccine in such a manner as to assure its potency when administered.
- Where vaccination is authorized, vaccinate calves at recommended ages, accurately identify them, and promptly report all vaccinations to State or Federal officials. If the tattoo is used, the accredited veterinarian is expected to utilize techniques that will assure legibility.

The Accredited Veterinarian: A Representative of the Government

The accredited veterinarian, in assuming responsibilities for brucellosis eradication program activities, becomes a representative of the Government and as such must support program policies. He should accept his full share of the program workload consistent with his available time. In estimating his participation, early completion of assignments should receive primary consideration. He should be willing to keep himself fully informed of the details of the program, as well as advances in the principles of brucellosis eradication. He should perform all services in accordance with State and Federal laws and regulations, and with approved procedures. As a representative of the Government and the veterinary profession, he should observe the highest standards of professional technique and conduct.

Some Suggested Techniques in Brucellosis Testing

1. Draw blood carefully so as to minimize contamination. Fill tubes about half full and allow to stand at room temperature until firmly clotted (2 or 3 hours), then, cool or refrigerate (do not freeze).
2. Identify tubes in accordance with instructions. Examine the stopper to assure firm fit and absence of leakage; carefully pack tubes as directed to prevent breakage.
3. Provide a separate sterile needle for each animal tested. Nose tongs should be disinfected between animals.
4. The following table is used in classifying animals tested, except as noted in paragraph 6, below.

Official Vaccinates				All Others			
1/50	1/100	1/200	Result	1/50	1/100	1/200	Result
-	-	-	Negative	-	-	-	Negative
I	-	-	Negative	I	-	-	Suspect
+	-	-	Negative	+	-	-	Suspect
+	I	-	Suspect	+	I	-	Suspect
+	+	-	Suspect	+	+	-	Positive
+	+	I	Suspect	+	+	I	Positive
+	+	+	Positive	+	+	+	Positive

5. Under the Uniform Methods and Rules for Brucellosis Eradication, officially vaccinated female dairy cattle 20 months of age and older, and officially vaccinated female cattle of the beef breeds 24 months of age and older, shall be blood tested.
6. Animals classified as suspects according to the above table that have a history of abortion may be designated reactors, if they are in a herd containing reactors. If the Veterinarian in Charge approves such designation, these animals may be eligible for indemnity in States where State or Federal indemnity is paid.

CATTLE TICK FEVER
(Bovine Piroplasmosis)

The cattle fever tick, Boophilus annulatus and Boophilus microplus, have been eradicated from the United States, except for a narrow buffer zone on the Texas-Mexico border. All Mexican territory adjacent to the lower Rio Grande River boundary is tick-infested. Reinfestations in Texas occur regularly from ticks carried by Mexican animals illegally entering the United States. The buffer zone, under State and Federal quarantine, extends approximately 500 miles, from Del Rio to the Gulf of Mexico. The zone is patrolled constantly by Department inspectors who, in cooperation with Texas livestock sanitary authorities, apprehend stray animals from Mexico and prevent the dissemination of fever ticks.

The Federal-State cooperative eradication program, which includes inspection, quarantine, and dipping, is now confined to this buffer strip in southern Texas. Occasional reinfestations of the vector, however, have occurred in California and Florida.

The cattle fever tick, B. annulatus, may be carried by deer and equines as well as cattle. The tropical variety, B. microplus, found in the U. S. Virgin Islands, Guam, Mexico, and sometimes Texas, also transmits tick fever. B. microplus may be carried by cattle, equines, sheep, goats, and deer. Hosts, such as deer, have created local problems in the tick eradication program but have not prevented elimination of the vector.

Veterinarians should be alert for Boophilus ticks and other species, such as the red tick, Rhipicephalus evertsi, capable of serving as vectors of exotic diseases. This is true when inspecting animals along the Mexican border, on routine inspections at concentration points, and whenever health certificates are issued at any location.

When fever ticks are suspected, animal health officials should be notified immediately and specimens collected for identification at the ANH Division Technical Services Laboratory, Beltsville, Md. When other species of ticks are found, they should be collected also for transmittal by livestock sanitary officials to the Parasite Reference Center of the Laboratory.

In the United States, the only recognized procedure for treating animals to destroy the cattle fever tick is by dipping at 14-day intervals in a permitted tickicide. This procedure is continued for periods up to a year depending on the season treatment is started.

Three tickicides are currently on the permitted list[2]: (1) Proprietary brand of arsenious oxide used at 0.22 percent. (2) Proprietary brands of dioxathion (Delnav®) used at 0.125 to 0.175 percent. (3) Proprietary brand of coumaphos (Co-Ral®) used at 0.20 to 0.25 percent.

DOURINE

Dourine, or suspected dourine, should be reported promptly to animal health officials. Veterinarians should be prepared to collect blood samples from suspected equines so that these authorities can forward preserved serum samples to the ANH Division Technical Services Laboratory, Beltsville, Md., for laboratory assistance in diagnosis, using the complement-fixation test.

EQUINE BABESIASIS
(Equine Piroplasmosis)

The first known case of equine babesiasis in the United States was diagnosed on August 10, 1961, in Florida. Neither the date, mode of entry into the country, nor the incidence in the United States is known. Confirmed cases of the disease have been reported in Arkansas, Georgia, Florida, Mississippi, Nebraska, New Jersey, New York, North Carolina, South Dakota, Tennessee, Puerto Rico, and on the island of St. Croix in the U.S. Virgin Islands. The disease is carried by the protozoa Babesia caballi and B. equi, which invade the red blood cells of solipedes. B. caballi is considered to be less pathogenic than B. equi. Worldwide, 15 species of ticks are incriminated or proven vectors of equine babesiasis. At least two of them are found in the United States--the brown dog tick, Rhipicephalus sanguineus, and the tropical horse tick, Dermacentor nitens. The complement fixation test for babesiasis is recognized as a practical laboratory aid to diagnosis. A less practical aid to diagnosis is the demonstration of protozoa in the red blood cells. Protozoa are most common in the peripheral circulation 2 to 5 days following appearance of clinical signs. Differential diagnosis is further complicated by the fact that equine babesiasis is clinically indistinguishable from equine infectious anemia.

Veterinarians should be alert to cases of sick horses. When equine babesiasis or equine infectious anemia is suspected, Federal or State animal health officials should be notified immediately. Accredited veterinarians should be acquainted with the special techniques of collecting peripheral blood for diagnosis of equine babesiasis. This information is available on request from Federal or State animal health officials. Ticks found on infected animals should be collected and forwarded to the ANH Division Technical Service Laboratory, USDA, Beltsville, Md. 20705 for identification.

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[2] See CFR Title 9, Part 72. 13.

EQUINE VIRAL ENCEPHALITIS

Equine viral encephalitis should be reported to State-Federal animal health officials.

FOREIGN ANIMAL DISEASES

Present-day speed and magnitude of world traffic has multiplied the possibilities of foreign animal diseases entering the United States. EARLY DETECTION, CONTAINMENT, AND ERADICATION are essential to prevent widespread outbreaks with the accompanying economic loss to the national economy. The export of animal products depends largely upon the ability of the livestock industry to maintain a population free of the devastating diseases that rack a large segment of the world's animal population annually.

Many of these diseases cannot be accurately differentiated clinically from the enzootic diseases of the United States. Foot-and-mouth disease and vesicular stomatitis, African swine fever and hog cholera, rinderpest and virus diarrhea, fowl plague and Newcastle disease are examples of foreign and domestic diseases that are clinically difficult to differentiate. The United States Animal Health Association's Committee on Foreign Animal Diseases has published a report describing the most important foreign animal diseases. This report revised in 1964, may be obtained from Dr. Wilmer L. Bendix, Secretary-Treasurer, United States Animal Health Association, 1444 E. Main Street, Richmond, Va. 23219.

The veterinary practitioner is the first line of defense against the establishment of a foreign animal disease in this country. His responsibility to recognize and to report a suspected new disease entity is paramount to the success of maintaining a healthy livestock population. To assist the practitioner in this area of responsibility, the ANH Division has strategically located veterinary diagnosticians specifically trained in the diagnosis of foreign diseases. Each diagnostician is fully equipped to collect and submit selected specimens to designated laboratories.

A State-Federal emergency disease eradication organization is established in each State to initiate immediate action in the event a foreign disease is diagnosed. These organizations through regular training and test exercises have developed the capability to mobilize equipment and manpower rapidly to contain and eradicate a foreign animal disease outbreak. Cooperating agencies such as the National Guard, State Police, and County Extension Service have been alerted to the need for their assistance.

ALL SUSPECTED FOREIGN ANIMAL DISEASES SHOULD BE REPORTED IMMEDIATELY to State or Federal animal disease control officials to insure coordination of efforts between the practitioner, the diagnostician, and the laboratory. Constant vigilance and investigation are essential to prevent the establishment of new diseases in the livestock population of the United States.

HOG CHOLERA

Known in the United States since the 1830's, hog cholera has been reported from all parts of the country and has killed more swine above weaning age than any other infectious disease. In 1962 an eradication campaign against hog cholera began.

The cooperative State-Federal hog cholera eradication program is based on the following principles:

- Prompt reporting of suspected outbreaks.
- Quarantine of infected and exposed swine.
- Controls over interstate and intrastate movements of swine.
- Proper disposal of infected and exposed swine.
- Cleaning and disinfection of infected premises and facilities.
- Cooking garbage fed to swine.
- Extensive informational and educational campaigns concerning the disease and its eradication.

The cooperative State-Federal eradication program is divided into four steps or phases. These are:

Phase I, Preparation.--In Phase I, a State obtains laws or regulations for carrying out the program. State and county eradication committees are organized, and they help distribute information to producers. In this phase States develop their reporting systems, develop their capability to investigate each outbreak, and reemphasize garbage cooking through increased inspection of commercial garbage feeders.

Phase II, Reduction of Incidence.--A State moves into Phase II when all procedures outlined for Phase I are operating at the proper level with the additional requirements that: (1) All outbreaks are quarantined with provisions for supervised disposal of infected animals and (2) intrastate shipping rules are established to prevent swine spreading hog cholera in moving from markets back to farms.

Phase III, Elimination of Outbreaks.--This is the first active eradication phase of the program. A State enters Phase III when the intensive control measures developed in the first two phases have sufficiently reduced the incidence of hog cholera. This phase involves the depopulation of infected herds (salvage of the healthy swine allowed), with indemnity when necessary.

Phase IV, Protection Against Reinfection.--When hog cholera apparently does not exist in a State, the State can move into Phase IV. All the steps in the preceding phases must be in full operation. In the event of outbreaks, herds must be completely depopulated (salvage is not allowed). Generally, a State in Phase IV will be declared hog cholera free when there have been no outbreaks of hog cholera in the State for at least 1 year and live-virus vaccines have not been used in the State for at least 1 year.

Federal regulations concerning the hog cholera eradication program:--

- Establish inspection and immunization procedures for healthy, unexposed feeding and breeding swine moving interstate.
- Prohibit the interstate shipment of swine affected with hog cholera.
- Restrict the interstate shipment of hogs fed raw garbage.
- Restrict the interstate shipment of hog cholera vaccines, and swine which have been vaccinated.

State laws and regulations may similarly restict swine moving intrastate and, in some cases, impose import requirements in addition to those in Federal regulations.

The accredited veterinarian should acquire a thorough background in the hog cholera eradication program in his State in order to advise clients engaged in producing or marketing swine. He should study the disease and its differential diagnosis and immediately report suspected outbreaks. Familiarity with State and Federal requirements for shipment of swine is also his responsibility.

LABORATORY ANIMALS

Regulations

Regulations and standards governing the humane care and treatment of certain laboratory animals are contained in Part I, Title 9, Code of Federal Regulations. These standards spell out the minimum requirements for housing, feeding, watering, sanitation, ventilation, shelter, separation of species, and veterinary medical care.

Purpose

The purpose of the Laboratory Animal Welfare Act (Public Law 89-544) and Regulations are:

- To protect owners of dogs and cats from theft of such pets.
- To prevent the sale or use of dogs and cats that have been stolen.

- To insure that certain animals intended for use in research facilities are provided humane care and treatment by regulating the transportation, purchase, sale, housing, care, handling, and treatment of such animals by persons or organizations engaged in using them for research or experimental purposes or in transporting, buying, or selling them for such use.

Animals Covered by Laboratory Animal Welfare Regulations

Laboratory Animal Welfare regulations of the Department are applicable to live dogs, cats, guinea pigs, hamsters, rabbits, and non-human primates.

Veterinary Medical Care

Adequate veterinary medical care is one of the eight minimum standards required by the Laboratory Animal Welfare Act. Sections 3.10, 3.34, 3.59, and 3.84 of Part 3 standards require that:

> Programs of disease control and prevention, euthanasia, and adequate veterinary care shall be established and maintained under the supervision and assistance of a doctor of veterinary medicine.

LEPTOSPIROSIS

Leptospirosis is caused by any one or a combination of Leptospira spp. All animals and man are susceptible to leptospirosis, depending upon the pathogenesis and host adaptability of the particular species of Leptospira involved. It is worldwide in distribution and is common in wildlife. Wild animals pose a threat to domestic animals as a potential reservoir for recurring outbreaks. Although eradication of leptospirosis is not possible with the tools now available, the disease can be controlled reasonably well by the proper use of available vaccines. Chemotherapy is also effective in many instances. Effective sanitation and rodent control are indispensable when handling outbreaks. An infectious disease, leptospirosis comes under Federal and State laws and regulations prohibiting the interstate movement of affected animals.

Blood tests for leptospirosis, offered as a service by many State laboratories, have been an effective aid in leptospirosis control. Because this disease frequently resembles brucellosis in cattle and swine, it is very important to check for both when you investigate outbreaks in which abortion is reported. Division activities related to leptospirosis are limited at present to diagnostic serology in selected locations.

LEUKOSIS

The term "leukosis" embraces a number of diseases of the lymphatic tissues. The disease is found in all domestic animals, poultry, and man. It is particularly prevalent in chickens and rodents. In all species where a cause has been definitely demonstrated, it has been a virus. The viruses of avian leukosis are well known and have been studied extensively. The viruses of murine leukosis also have been studied extensively although isolated comparatively recently. A virus has been recovered from cats affected with feline leukosis. Viruslike particles have been seen with the electron microscope in lymphoid tumor tissues of man and the larger domestic animals. There is good reason to believe that when the causes of leukosis in the larger domestic animals and man have been found, they will prove to be viruses. The disease is being recognized more frequently in cattle in recent years, and much research is under way to establish its etiology. Because there is evidence that it is transmissible, domestic animals clinically affected with this disease should not be moved from herd to herd.

Denmark has had a bovine leukosis eradication program since 1959. Considerable progress has been made there. Other countries are viewing the disease with some degree of alarm.

Germany and Sweden have found leukosis to be so prevalent that they cannot consider adopting a Denmark-type eradication program at this time without seriously interfering with the economy of their cattle industry. A number of foreign countries now require surveillance of herds of origin from which individual animals are imported. It is evident that leukosis will assume increasing importance in the years to come.

MASTITIS

Mastitis is the most serious and costly disease of dairy cattle in the United States. Although the causes are many and varied, a number of them are infectious. At least one form of mastitis--that caused by Streptococcus agalactiae--can be eradicated. Because of its insidious nature, however, it is frequently reintroduced with newly purchased cows. Other forms of mastitis can be materially reduced in frequency through improved husbandry, meticulous milking procedures, good sanitation, proper maintenance of milking equipment, and constant surveillance of milk quality.

The National Mastitis Council is leading the mastitis abatement effort in the United States; Statewide mastitis committees are being organized everywhere to increase the local efforts. There is a trend toward organized State programs, based on milk quality and screening tests, with obligatory participation on the part of all dairymen. The majority of such programs utilize bulk-milk tests that disclose abnormally high leukocyte content. Because the mammary secretions of cows with mastitis do not meet the definition of milk as a human food product, bulk supplies containing such abnormal secretions are considered adulterated. Drugs used in treating mastitis must also be excluded from the public milk supply. The private practicing accredited veterinarian can do much to alleviate the mastitis situation and improve the quality of the public milk supply. Health examinations of dairy cows should always include the udder.

MUCOSAL DISEASE AND OTHER SIMILAR INFECTIOUS DISEASES

Bovine virus diarrhea, infectious bovine rhinotracheitis, and other infectious diseases of cattle with which they may be easily confused should be reported immediately to State or Federal animal health authorities. Correct and early diagnosis is very important because these diseases closely resemble such serious exotic diseases as rinderpest and contagious pleuropneumonia which are a constant threat to the livestock of the United States. Specially trained foreign animal disease diagnosticians are available to aid in the diagnosis of all outbreaks of diseases that could conceivably be of foreign origin. Alert private practicing veterinarians are an indispensable line of defense against exotic diseases, which could cause devastating plagues among our livestock. The usual laws and regulations--that animals affected with infectious or communicable diseases may not move interstate--apply to these diseases.

POULTRY DISEASES

Poultry diseases cost producers about $300 million annually. Respiratory diseases, such as infectious bronchitis, Newcastle disease, and chronic respiratory disease (CRD) triggered by Mycoplasma organisms and complicated by Escherichia coli, cause a major part of this loss. Airsacculitis and related conditions produced by respiratory diseases account for about 40 percent of postmortem condemnation of poultry in federally inspected poultry processing plants. Veterinarians who inspect flocks for interstate shipment or for export should be alert for evidence and history of respiratory diseases. The agglutination test plus hemagglutination inhibition, is used to diagnose mycoplasma gallisepticum.

Avian leukosis causes flock mortality and condemnation of carcass losses estimated at $65 million annually. It is the most rapidly increasing reported cause of postmortem condemnations in federally inspected poultry processing plants.

No Federal interstate shipping requirements exist for poultry relative to pullorum disease and fowl typhoid; however, many receiving States require that inshipped hatching eggs and poultry, except poultry intended for immediate slaughter, originate from flocks participating in the National Poultry or Turkey Improvement Plans (NPIP-NTIP), or equivalent programs. Accredited veterinarians may be called upon to inspect, test, and certify poultry and turkey shipments from NPIP or NTIP flocks for interstate or export movement. They, therefore, should be familiar with NPIP and NTIP or equivalent requirements.

Information about the NPIP-NTIP may be obtained from the office of the State veterinarian, appropriate State poultry disease control official, or Animal Health Division Veterinarian in Charge. Most States participate in a cooperative State-Federal system for reporting diagnosis and outbreaks of pullorum and typhoid. Accredited veterinarians should submit such reports to the appropriate State poultry disease control official.

The regulations of the receiving State regarding shipment of poultry into that State should be determined prior to movement. The office of the responsible disease control official can provide this information.

Most States require routine reporting of many domestic diseases of poultry. More information on this or other poultry diseases may be obtained from the office of the State disease control official.

Psittacosis, or ornithosis, outbreaks of suspected cases should be promptly reported. Positive diagnosis is based on isolation of the viral agent. Federal regulations prohibit interstate movement of live poultry, carcasses, parts, or offal from poultry with ornithosis. (See Title 9, CFR, Part 82 for more detailed information.)

Poultry disease outbreaks that manifest unusual virulence suggestive of an exotic disease, such as fowl plague or Asiatic-type Newcastle disease, should be immediately reported to the appropriate State poultry disease control official. Live poultry affected with or exposed to fowl plague, or carcasses so affected, may not be moved interstate for any purpose. (See Title 9, CFR, Part 81 for more detailed information.)

SALMONELLOSIS

Salmonellosis is the most frequently reported bacterial disease in the United States that is common to man and animals. During the past decade epidemiological investigations indicate that a transmission of Salmonella from animal feeds to animals and animals to animal products (for human food) to man occurs. In an attempt to break this chain of transmission, a cooperative Salmonella control program is being carried out. The program involves processors of animal byproducts, fish meal manufacturers and State-Federal disease control agencies. (Livestock and poultry feed ingredients from animal and marine sources were found to have the highest Salmonella contamination rate in a 1967 State-Federal survey for Salmonella in animal feeds at basic feed mills.)

Additional studies to develop control measures against lateral or horizontal transmission of Salmonella in flocks and herds are also being conducted.

SCABIES

Animals affected with scabies are prohibited by Federal regulations from moving interstate. Each State also has regulations concerning the handling of infected and exposed animals and movements from affected herds and flocks. National programs to eradicate both psoroptic sheep and cattle scabies are under way.

In August 1960, Federal sheep scabies regulations were amended and an accelerated sheep scabies eradication program was begun. At that time--

- 1,421 counties were considered sheep-scabies free.
- Only 1 State, embracing 44 counties, had an active eradication program.
- 1,689 infected counties in 23 States and territories failed to qualify as sheep scabies eradication areas.

By July 1, 1967, every county in the United States was participating in the Accelerated Sheep Scabies Eradication Program (a total of 3,154 counties), and all of the 50 States had qualified as sheep-scabies free.

Scabies is spread mainly by the introduction of infected animals into herds or flocks. It continues to be a problem because of undetected and untreated reservoirs of infection. Advanced cases are easily identified. The early, atypical cases with little loss of fleece and limited scratching are more difficult to detect.

Veterinarians should have a hand lens for examining ectoparasites and take skin scrapings when scabies is suspected. Where there is a loss of fleece or hair, mites are more commonly found at the periphery of the denuded area. The maceration flotation procedure should be used whenever mites are not observed by visual examination. In all cases where scabies is suspected, State and Federal animal health officials should be notified immediately.

Scabies is comparatively easy to eradicate by dipping, if all animals in infected and exposed herds or flocks are properly dipped in a permitted dip and held in the dip solution 1 to 3 minutes depending on the permitted dip used. Animals in infected herds or flocks are dipped twice; those in exposed herds or flocks at least once. The interval between the first and second dipping is 10 to 14 days. Frequently, veterinarians are called upon to inspect and dip sheep and cattle because of scabies. They also issue certificates for interstate movements or for compliance with State-of-destination requirements.

It is very important that veterinarians determine the origin of infection so that animals moved from infected and exposed herds may be located and treated.

SCRAPIE

Scrapie is an infectious, chronic, degenerative disease of sheep and goats with an onset that is difficult to detect. An owner may first notice only unusual behavior in affected sheep. The veterinarian must become adept at recognizing early signs and be qualified to explain in detail to the owner the characteristics of the disease.

The diagnosis of scrapie is based on signs, history, and histopathological findings. The disease appears most frequently in sheep 2 to 4 years old and seldom in sheep under 18 months of age. A clinical diagnosis of scrapie is confirmed by demonstrating vacuoles in neurons of the medulla on histological examination. The disease should be differentiated from listeriosis, Aujesky's disease, rabies, pregnancy toxemia, and scabies.

Scrapie was first diagnosed in the United States in a Michigan flock in 1947. The disease has now been diagnosed in 193 flocks in the States of Alabama, California, Colorado, Connecticut, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Mississippi, Missouri, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming. Of the infected flocks, 8 were of Cheviot breed, 1 of the Hampshire breed, 181 of the Suffolk breed, 2 Montadale, and 1 cross-bred Hampshire-Suffolk.

The cause of scrapie has been a subject of controversy for many years. The consensus of most research workers of today is that scrapie is caused by a transmissible agent, that it is a communicable and infectious disease, and that its spread from affected to healthy animals is

controlled by the genetically inherited resistance or susceptibility of the individual animal exposed to the causative agent. The transmissible agent of scrapie readily can be artificially transmitted to sheep, goats, mice, rats, and hamsters from nearly any tissue of the affected animal by many routes of inoculation.

The State-Federal Cooperative Eradication program now recognizes both the infectious disease theory and the inheritable resistance or susceptibility of the animal to scrapie. The program provides for the slaughter of all bloodline related animals (sire and dam, all progeny, sibs and half sibs of the affected animal) wherever they may be. The non-bloodline animals in the source or infected flocks are quarantined for 24 months with monthly surveillance inspections of these flocks continuing for an additional 18 months following quarantine release. Non-bloodline exposed animals sold from the source of infected flocks will be under surveillance for 42 months following last exposure, with semiannual inspections. In some cases, depending on circumstances of the outbreak, the entire source flock and infected flocks, as well as all exposed animals moved from these flocks and immediate progeny of these animals are slaughtered. Periodic surveillance inspections of about 296 flocks are now being conducted in 22 States.

When scrapie is suspected, animal health officials should be notified immediately. The suspected animal should not be slaughtered until the officials have had an opportunity to observe the clinical signs and have determined that the case is advanced sufficiently so that a satisfactory specimen of brain tissue can be obtained for laboratory examination.

SCREWWORMS

Screwworms are the larvae (maggots) of the fly, Cochliomyia hominivorax. They are true parasites, feeding only on the living flesh of warmblooded animals. Infested, untreated animals may die.

Screwworms are natives of tropical and subtropical areas of North and South America. They were first reported in the Southwest almost 150 years ago. In 1933, screwworms were reported in Georgia, presumably introduced on infested animals from the Southwest. They spread rapidly and within 2 years were found throughout Florida and southern Georgia. Each summer, they would spread into Georgia, Alabama, South Carolina, and often into States farther north. Each winter, cold weather killed screwworms in most Southeastern areas, but the mild winter climate of peninsular Florida and, occasionally southern Georgia, Alabama, and South Carolina permitted them to exist through the winter. Surveys revealed annual losses from screwworms of approximately $20 million in the Southeast. About one-half of this loss occurred in Florida.

During 1958-59, an eradication program was conducted over 85,000 square miles in Florida, Georgia, and Alabama with the production and release of more than 3 billion laboratory-reared screwworm flies sterilized with radioactive Cobalt-60. The mating of the laboratory-reared sterile males with native females resulted in the production of eggs that failed to hatch. Continued release of irradiated males in overwhelming numbers eventually reduced the native screwworm population in the Southeast to zero. Mass production and dispersal of sterile flies ended in November 1959. The cost for this successful eradication program was approximately $10 million or about one-half of the cost of living with screwworms each year.

During the eradication program, a livestock inspection line was maintained along the eastern border of Arkansas and Louisiana to protect the Southeastern States from becoming reinfested with screwworms from the self-sustaining populations of the Western States. This inspection was discontinued in June 1964.

In the spring of 1962, a program was started to eradicate screwworms from Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. This was a much more complex and difficult undertaking than the elimination of the pest from the Southeastern States. In the Southeast, screwworms usually were able to survive through the winter only in peninsular Florida. Water on three sides and cold weather on the north acted as effective barriers. The Southwestern

States have no such advantages. The screwworm population in the Republic of Mexico provides a constant threat of reinfestation.

A barrier zone was established along the United States-Mexico border to protect the area from reinfestation. This barrier zone is formed by continuous release of sterile screwworm flies to prevent the invasion of native flies that could establish a self-sustaining new population. The Southwestern States of Texas, New Mexico, Oklahoma, Arkansas, and Louisiana were declared to be free of screwworms in February 1964. However, sporadic outbreaks have occurred since that time caused by migrating flies and movements of infested animals. Each outbreak has been successfully suppressed.

In the spring of 1965, eradication efforts were initiated in Arizona and California, and the artificial sterile fly barrier zone along the Mexican border was extended to the Pacific Ocean.

In spring of 1966, California and Arizona were declared free of screwworms.

It was estimated that screwworms caused an average annual loss of $100 million to the livestock industry before the beginning of the screwworm eradication program. Cost of eradication and the subsequent maintenance of a sterile screwworm fly barrier has been about $6 million a year.

Veterinarians should be alert for cases of myiasis when they treat animals or issue health certificates. When dipterous larvae are found, animal health officials should be immediately notified and specimens collected for identification at the ANH Division Technical Services Laboratory, Beltsville, Md. The interstate movement of livestock infested with screwworms is unlawful. For regulations concerning interstate shipment of screwworms, see CFR, Title 9, Part 71.

TRICHINOSIS

Trichinosis is worldwide in distribution and has most likely affected man as well as animals for several hundred years. Cost for the control (meat inspection, special processing) of this parasite has probably exceeded by more than 100 times the combined amount spent for all other helminthic diseases. Infection in our Nation's swine is at an all-time low, with recent surveys having disclosed an infection rate of less than 0.2 percent in grain-fed hogs and only 0.5 percent in cooked-garbage-fed hogs. Hogs fed raw garbage have a much higher incidence of trichinosis infection.

A recently developed technique for identifying trichinae infected swine at slaughter appears to have merit as a tool in the eradication of this disease. In this technique, diaphragm samples are collected and one half of each is pooled into groups of twenty. These are subjected to digestion technique, then examined microscopically. If trichinae are found, each remaining half of diaphragm sample of the 20-sample lot is tested in order to identify the infected animal.

Studies to date indicate this method is practical and will assist in providing trichinae-free pork. The method will also provide a traceback system under which trichinae-infected herds can be identified, providing a means to eliminate these foci of infection.

TUBERCULOSIS ERADICATION

The Program

The cooperative State-Federal tuberculosis eradication program began in 1917. At that time tuberculosis caused more losses among farm animals than any other infectious disease. Economic losses to farmers, stockyards, packers, and transportation agencies, as well as the dangers to human health led to the demands for an organized program to eradicate the disease. The program

was established with the long-range objective being the total eradication of bovine tuberculosis from the Nation's livestock. To obtain this objective, procedures were adopted as follows:

1. All cattle are to be tuberculin tested.
2. All reactors to the tuberculin test are to be slaughtered and subjected to necropsy.
3. All infected premises are to be cleaned and disinfected.
4. Animal movements are to be traced into and from infected herds to determine where the infection originated and where it may have spread.

When an area succeeded in reducing the reactor rate among cattle to less than 0.5 percent, it was to be designated as a modified accredited area. Through diligent application of the procedures adopted, all counties in the United States attained this status by 1940. The incidence of bovine tuberculosis was reduced from approximately 5 percent to less than 0.5 percent. In some areas the infection had been over 50 percent. In 1968 the infection rate as measured by the tuberculin test was less than 0.08 percent. The prevalence of the disease as measured by the number of carcasses showing lesions of tuberculosis at the time of regular slaughter (excluding reactors) was reduced from 2,100 per 100 thousand cattle slaughtered under Federal meat inspection in 1917 to less than 2 per 100 thousand cattle slaughtered under Federal inspection in 1968.

When the country was first designated as modified accredited in 1940, this led to the belief that the objective had been reached and tuberculosis had been eliminated from the cattle population. Despite the vigorous application of established procedures since the beginning of the program, tuberculosis has not been eradicated. The disease occurs in all sections of the country. Foci of infection are located constantly by the tuberculin test and by traceback to herds of origin of cattle found to have lesions of tuberculosis at time of regular kill. The disease occurs in all species of animals. It is a major cause of losses in both swine and poultry.

Federal regulations concerning tuberculosis eradication will be found in the Code of Federal Regulations, Title 9, Chapter I, Subchapter B, Part 51, and Subchapter C, Parts 71 and 77.

The tuberculosis eradication program of the individual States is conducted under the laws and regulations of that State. The Uniform Methods and Rules, Tuberculosis Eradication, are used as a guide. These methods and rules are adopted by the United States Animal Health Association and approved by the Animal Health Division, Agricultural Research Service, USDA. Amendments to these methods and rules are considered by the USAHA annually. Additional measures are added to the program to achieve tuberculosis eradication as they become necessary. The current program includes the use of postmortem findings by meat inspection. Stress is being placed on tracing animals that show lesions of tuberculosis at the time they are slaughtered to their herds of origin; locating the origin of reactors, and following up exposed animals that are removed from infected herds. Attention is directed toward liquidating herds with known mycobacterium bovis infection. The provision for Federal indemnity payments for exposed animals when the entire infected herd is slaughtered has been available since 1963. This permits the liquidation of non-reacting animals to the tuberculin test in a herd where it has been determined that liquidation of the entire herd will contribute to the tuberculosis eradication program.

Services of Accredited Veterinarians

The accredited veterinarian is an intrinsic part of the tuberculosis eradication program. He contributes to the eradication effort while providing professional services to his client. His clients depend on him for advice regarding the prevention and eradication of the disease on a farm basis. The State and Federal animal disease control officials depend on him for diagnosing the disease and informing his clients about tuberculosis and the eradication program.

The accredited veterinarian is expected to know the laws and regulations of his State regarding tuberculosis and to be thoroughly familiar with the eradication program. He should:

1. Accurately inform herd owners about the program and the disease.

2. Accurately identify all herds and animals tuberculin tested and make complete records on standard forms regardless of reason for the test.

3. Accurately record tuberculin test information and animal identity on Interstate Health Certificates when certifying animals for such movement.

4. Make diagnosis on the proper reading date in accordance with the Uniform Methods and Rules.

5. Tag, brand, and appraise reactors.

6. Issue necessary forms, such as quarantine notices and permits, for movement of reactors to slaughter.

7. Instruct owners concerning the disinfection of premises.

8. Inform owners about indemnity payments.

9. Instruct owners about management practices aimed at avoiding the appearance or recurrence of the disease.

10. Leave copies of test reports with owners.

11. Make honest effort to obtain herd histories, particularly as they relate to animal movements into and out of infected herds and promptly report such information.

12. Submit promptly all test reports and allied or supporting papers to the State-Federal Cooperative Program Office.

13. Seek assistance from State and Federal veterinarians when in doubt about any phase of the program.

The Tuberculosis Test

Restraint.--Each animal must be effectively restrained by nose lead or other means. A good injection is imperative. This is impossible if an animal moves when the needle is inserted. Nose leads should be thoroughly washed in disinfectant solution between animals.

Injection Site.--The site is the skin of the caudal fold at a point 2/3 of the distance from the base of the tail. Either side may be used. It is advisable, however, to use the same side habitually.

Before the injection is made, the caudal fold is examined for abnormalities that might confuse observations. These are noted and indicated to the owner.

The site is cleaned with dry cotton or cotton moistened with alcohol. Strong disinfectants may cause irritation and confuse test interpretations.

Injection Technique.--Before use, the syringe is checked for leakage, needle gage, and exposure, and adjustment for delivery of accurate tuberculin dosage. In routine area testing the tuberculin dosage is 0.1 cc.

In filling the syringe, air bubbles should be eliminated. An accurate test reading requires a careful injection. The needle is inserted between the layers of skin, then withdrawn slightly. The injection should be intradermal, not subcutaneous. The needle is cleaned with cotton moistened with alcohol between each injection.

Animal Identification.--If an animal does not have a tag, it is identified by inserting a passed tag in the right ear. Record tag number or tattoo for each animal on test chart. The owner is informed of the number of cattle under test and advised that they are to be isolated and retained on the premises until observations are made in 72 hours.

Observation of Test.--Observations are made 72 hours after injection. The ear tag or tattoo is read at the time of observation to be certain that animals are the ones injected. The injection site of each animal is observed visually and by palpation. Visual observation alone is an improper and unacceptable procedure.

It is helpful also to palpate the region anterior to the point of injection. Frequently, in reactor animals, the lymphatics are so enlarged as to be readily palpable under the skin of the caudal fold.

Failure to observe and palpate every animal, as well as hurried and careless interpretations, can cause tuberculosis to linger in a herd and discredit the test.

Interpretation and Classification.--Tissue disturbance at the injection site may vary from barely perceptible to a swelling the size of a fist. It may be hard and circumscribed, or soft and infiltrated with no distinct line or demarcation.

Neither size, shape, nor appearance of the tissue response reflects the degree of infection. Classification of tuberculin responses, therefore, is based on the professional judgment of the testing veterinarian after consideration of all aspects of both individual and herd history.

(1) Recording and Reporting Response:

All reactor and suspect responses are recorded as symbols in the observations column of the test report.

- P1 is the standard symbol for a circumscribed swelling the size of a small pea (3/16 inch diameter).
- P2, P3, P4, etc., refer to circumscribed swellings 2, 3, or 4 times the diameter of a small pea.
  PP is a "pin-point" circumscribed swelling smaller than P1.
- X is the standard symbol for a diffuse swelling which is less than twice the thickness of the skin of the normal caudal fold.
- X2 is a diffuse swelling equal to twice the thickness of normal fold of skin.

(2) The Negative ("N") Classification:

- Animals with no tissue response are classified as negative.
- Animals showing minimal tissue response may also be considered as negative, provided: (a) There are no reactors on the current test, (b) no lesions of advanced tuberculosis were demonstrated on previous tests, and (c) that the animals are not those in a retest of accredited herds, or in herds qualifying for accreditation, and are not intended for sale, show, or interstate shipment.

These animals are classified as suspects or reactors.

(3) The Suspect ("S") Classification:

- This is a broad classification. It is to be used for animals showing doubtful response to tuberculin which, in the professional judgment of the testing veterinarian, should not be classified as reactors.

INTERSTATE AND INTRASTATE MOVEMENT OF LIVESTOCK

The early warning line in the protection of the Nation's animal food supply is the veterinarians on the ranches and farms. The second defense is the veterinarians at the centers of livestock concentration--the public stockyards and the specifically approved stockyards and livestock markets--along all lines of transportation.

Accredited veterinarians at ranches and farms:

- Test, vaccinate, and perform other veterinary functions in compliance with State and Federal regulations.
- Issue certificates, after inspection, attesting to the health of animals to be moved interstate and intrastate according to State and Federal regulations.
- Ensure, before a certificate is issued, that reactors are properly tagged and branded and that the approved destination of animals is placed on ANH Form 1-27.
- Cooperate with animal disease eradication officials in carrying out and enforcing State and Federal regulations.

Public Stockyards

Federal inspection of livestock at public stockyards originated in 1890. It arose from congressional authorization for the investigation of pleuropneumonia, or any contagious, infectious, or communicable disease "along the lines of transportation from all parts of the United States...." Today, this embraces health inspections for all communicable diseases of all livestock received at federally inspected stockyards.

Accredited veterinarians at public stockyards:

- Cooperate with animal disease eradication officials in the enforcement of State and Federal regulations.
- Test, vaccinate, and perform other veterinary functions in compliance with State and Federal regulations.
- Perform additional services at some public stockyards under special authorization.

Specifically Approved Stockyards and Livestock Markets

The designation of specifically approved stockyards and livestock markets was authorized under Federal regulations on January 1, 1957. The original purpose--preventing the spread of brucellosis and paratuberculosis--has been expanded to include hog cholera and sheep scabies.

Accredited veterinarians at specifically approved yards and markets--

- Make careful inspection of animals, before issuing certificates, to ensure that only healthy animals are permitted to be moved.

- Promptly notify State or Federal officials concerned whenever evidence of a reportable communicable disease is found.
- Supervise the proper disposition of exposed and diseased animals.
- Supervise the cleaning and disinfecting of pens, premises, and vehicles that have contained diseased animals.
- Test, vaccinate, and issue certificates of animal health to comply with Federal regulations, as well as those of the State of destination.
- Inspect animals for compliance with Federal brucellosis regulations.
- Issue certificates that are clear, accurate, and legible, and make prompt distribution of these as required by State and Federal regulations.

Practically all States have health requirements governing the admission of animals from other States and laws and regulations controlling the movement of livestock within the State. Accredited veterinarians should be familiar with State and Federal regulations on livestock movements. These are set forth in ARS 91-17-4 "Health Requirements and Regulations Governing the Interstate and International Movement of Livestock and Poultry," published by ARS, U.S. Department of Agriculture.

Unqualified acceptance and conscientious performance of all duties involved in the interstate and intrastate movement of livestock is a basic responsibility of accredited veterinarians.

DIAGNOSTIC LABORATORY SERVICES

ANH Division's diagnostic services are performed at two locations: (1) the National Animal Disease Laboratory (NADL) at Ames, Iowa, 50011, and (2) the Animal Health Division Technical Services Laboratory at Beltsville, Md. 20705.

Diagnostic Services (NADL) Ames, Iowa

Diagnostic Services, located at the National Animal Disease Laboratory at Ames, Iowa, provides laboratory reference assistance to the Division's State-Federal Cooperative Eradication programs.

The funded programs receiving such assistance are: Brucellosis, tuberculosis, hog cholera, scabies, scrapie, salmonellosis, miscellaneous, import-export, screwworm, leukosis, and equine infectious anemia.

This assistance is provided through five laboratory sections or disciplines: Bacteriology, virology, pathology and toxicology, diagnostic reagents, and technical and professional development schools.

- Provide laboratory support to Animal Health Division programs for diagnosing related animal diseases, such as salmonellosis, hog cholera, scrapie, tuberculosis, brucellosis, vesicular stomatitis, suspected exotic poultry diseases, and toxicities.
- Develop, standardize, and evaluate new and improved procedures, techniques, and reagents used in diagnosing animal diseases.
- Develop and carry out scientific training programs for State-Federal regulatory and diagnostic personnel through formal courses, on-the-job training at NADL, and reference training visits to State diagnostic laboratories.
- Produce and standardize diagnostic reagents used by ANH and related programs. Establish and maintain diagnostic reference centers for the classification and identification of pathogenic agents.
- Develop and maintain diagnostic reference assistance and consultation services for ANH field stations, State diagnostic laboratories, university research personnel, and foreign scientists.

- Investigate selected animal disease conditions in the field and follow up with definitive studies in the laboratory.
- Develop a biometrical reporting system for animal diseases that will provide accurate information, such as morbidity and mortality rates, geographical distribution, seasonal incidence, and rate of dissemination.
- Develop and carry out animal disease surveillance methods for the Animal Health Division in cooperation with the States.
- See guide on pages 27-29 indicating the proper preparation and shipment of laboratory specimens including the type of test and time required for each.

ANH Technical Services Laboratory, Beltsville, Md.

Cooperative Laboratory Surveillance--One or more laboratories are maintained by each State in cooperation with the ANH Division to perform official tests for brucellosis. All cooperative laboratories at the State-Federal level are requested to participate in semiannual check tests on titered serums provided by the ANH Technical Services Laboratory. All other laboratories approved to perform official tests are provided with supportive services from an appropriate cooperative laboratory.

All veterinarians are encouraged to occasionally exchange Brucella vaccine with a State-Federal cooperative laboratory for viability tests as an indication of its quality and effectiveness.

These laboratories provide diagnostic services for noncontagious and parasitic diseases. The facilities are available to the accredited veterinarian. Specimens should be submitted through the ANH Division Veterinarian in Charge. The following suggestions should govern the preparation and transmittal of specimens:

- ANH Division Sero-Diagnostic Reference Laboratory: Serum for anaplasmosis, dourine, glanders, and equine babesiasis, and CF tests should be preserved with sufficient aqueous phenol to provide a final concentration of 0.5 percent. This is done by adding one part of a 5-percent aqueous solution of phenol to nine parts of serum. The proportions of phenol and serum should not be exceeded. The tube should be well shaken to assure proper preservation.

  A minimum of 5.0 ml. of clear serum is needed and specimens need not be refrigerated. Samples should be accompanied by an original and four copies of the ANH 10-9 anaplasmosis test report form or ANH 10-1 laboratory request report form.

  Serum from birds suspected of having PPLO infections may be sent to the ANH Technical Service Laboratory, Beltsville, Md. 20705 for confirmation of diagnosis.

  The Beltsville Laboratory distributes to field laboratories positive and negative pleuropneumonialike organism (PPLO) serum for test controls, as well as supplies hemagglutination antigen (HA), which is used as a confirmative test of serum plate and tube reactions.

- ANH Division Screwworm Identification Laboratory:--Specimens of adult and/or larval forms should be obtained from each individual case and placed in separate brucellosis blood vials containing 70-percent alcohol. Specimens are shipped air mail. The package should contain two copies of the field collection form or two copies of ANH 11-3 forms with complete collection data.

- ANH Division Ectoparasite Reference Laboratory:--Mites should be separated from skin scrapings and mounted in Hoyer's medium on a clean microscope slide. Multiple slides are preferred. The Hoyer's mounted slides should be heated not to exceed 110° F. for 24 hours. Each case should be accompanied by an ANH Form 5-38. Where mounting facilities are not available, multiple mites from each animal may be shipped in small vials containing 70-percent alcohol. Dry scrapings are undesirable. Where local identification is impossible, individual animal scrapings shipped in a closed vial without alcohol or other preservatives will be accepted.

  In the submission of ticks, several should be carefully removed from each animal host and placed in a brucellosis bleeding vial containing 70-percent alcohol. Ticks from different species of host should never be mixed. ANH Form 5-38 should accompany each lot of ticks from different owners.

- ANH Division Chemical Reference Laboratory:--All commercial chemical preparations used in regulatory programs are submitted for chemical analysis prior to acceptance by the Division. Current lists of permitted disinfectants and dips are thereby maintained. Specimens of products for analysis should be submitted in either 8- or 16-ounce glass or plastic bottles carefully packed to prevent breakage.

All specimens of parasites, chemical preparations (except toxicological) and sera (nonvirus serum) for complement-fixation tests are sent directly to:

ANH Division Technical Service Laboratory
ARS, USDA
Agricultural Research Center, Bldg. 320
Beltsville, Md. 20705

The type of specimen should be indicated on the outside of the package.

NEVER SHIP SPECIMENS FROM SUSPECTED VESICULAR DISEASE OR ANY FOREIGN ANIMAL DISEASE TO LABORATORIES WITHOUT PRIOR PERMISSION FROM THE HYATTSVILLE, MD., OFFICE.

A guide to the proper submission of diagnostic specimens to Diagnostic Services, National Animal Disease Laboratory, Ames, Iowa 50010
(all specimens should be submitted through the Veterinarian In Charge of State of origin)

Disease	Specimen required	Test	Time required for test by laboratory	Packing	Preservation	Shipment
Anthrax	Specimen of umbilicel tape (2 to 3 inchee long) that hae been eoaked in blood and dried.	Iaolation and identification. Phage typing.	72 hr. for eech test.	Sterile ecrew-cap test tube in s double mailer with the ineide con-tainer metal.	None	Registared eirmail.
	Suepicioue culture.					
Bluetongue..... (for export pur-poeee).	Serum - 10 ml..... Blood with heparin	CF teet ..... Animal inoculation	24 hr. 3 to 4 wk.	Polystyrene container.... Polyetyrene container....	Frozen (in ecrew cep tube) ..... Frozen	Air express Air expreas.
Bovine virue diarrhea (mucoeal diaeaee).	Citrated whole blood, epleen, meeentaric lymph nodes, Peyer'e patch, eection of femur for bone marrow, naeal exudate, fecee.	Virus ieoletion and identificetion.	1 to 3 wk.	Polystyrene container....	Frozen (dry ice).....	Air expreee.
	Paired eerume - ecute and con-valeecent - 5 ml.	Serum neutraliaetion	1 to 3 wk.	Polystyrene container....	Frozen (dry ice).....	Air expreee.
Brucallocie.....	Supramammary lymph nodee (entire), additional lymph nodes and tieeuee aa euspected.	Brucelle isolation and typing.....	2 to 8 wk.	Polystyrene container (eent on request).	Frozen (dry ice) (eeal) epecimen from CO_2 gas).	Airmail.
	Serum—4 to 5 ml. per animal (uee plaatic viale if poeeible).	Plate, tube, and eupplemental teete..	1 to 2 wk.	Polystyrene container....	Ice refrigeration or frozen with dry ice.	
	Cultures, on elant.....	Identification and typing.....	2 to 4 wk.	Double mailing container-inner tube metal.	None.	
	Vaccinee—5 eingle-doee viale or 2 multiple-doee viale.	Viebility, purity, pH, and colonial characteriatice.	7 to 10 daye.	Double container in poly-etyrene container.	Ice refrigeration (ice can) not frozen.	
	Antigen, 2 viale.....	Purity, etarility, comparative eeneitivity, pH, and cell concentra-tion.	7 to 10 days.	Double container in poly-etyrene container.	Ice refrigeration (ice can) not frozen.	Airmail.
	Milk—30 ml. minimum per quarter, obtained aceptically in eterile glaaa tubee.	Culture, ring teet, or whey taet.....	2 to 8 wk.	Polyetyrene container....	Ice refrigeretion (ice cen).....	Air expreee.
Ram epididymitie	Serum—3 ml. or more, uee pleetic vial if poeeible.	CF teet for ram epididymitie.....	1 to 2 wk.	Polystyrene container....	Ice refrigeration (ice can) or frozen with dry ice.	Air expreee.
Dermatomycoeee....	Infected hair, ekin ecrapinge, ecabe, or crust from edge of eue-picioue area.	Iaoletion and identificetion of dermatophyte.	1 to 6 wk.	Clean dry envelope (paper).	None	Certified mail.
	Affected tieeue extending into normal tieeue.	Hietopathologic examination.....	1 wk.	Double mailing container.	10% buffered formalin.....	Air expreee.
Escherichis coli.	Culture, on elant.....	Serotyping.....	3 weeke.	Double mailing container inner tube metal.	None.....	Certified mail.
Hog cholara.....	Splaen, tonsil, mandibular lymph node, or whole blood (clotted).	Fluoreecent antibody cell culture teet.	24-48 hr. Buffy cell subculture re-quiree an addi-tional 8 to 10 daye.	Polystyrene container....	Frozen (dry ice).....	Air expreee.
	Spleen, tonsil, mandibular lymph node, or whole blood (clotted).	Animal inoculation.....	Up to 1 1/2 mo.	Polyetyrene container....	Frozen (dry ice).....	Air expreee.
	Serum - 5 ml.....	Fluoreecent antibody eerum neutra-lization.	2 to 3 daye.	Polyetyrene container....	Frozen (dry ice).....	Air expreee.
	Tonsil, epleen, carvical lymph nodea (When chronic hog cholera is euspected, eubmit 2 to 3 in. of the terminal ileum).	Fluoreacent antibody tieeue section teat.	1 to 3 hr.	Polyetyrene container....	Refrigeratad (with ice can) or frozen (dry ice).	Air expreee.
	Brain (entire).....	Hietopathologic examination.....	1 hr. to 1 day.	Polystyrene container....	10% buffared formalin (packed to prevent freezing).	Air expreee.

A guide to the proper submission of diagnostic specimens to Diagnostic Services, National Animal Disease Laboratory, Ames, Iowa 50010
(all specimens should be submitted through the Veterinarian In Charge of State of origin)

Disease	Specimen required	Test	Time required for test by laboratory	Packing	Preservation	Shipment
Infectious bovine rhinotracheitis..	Lung, bronchial lymph nodes, nasal exudate or washings collected with heart infusion broth or suitable sterile protein solution.	Virus isolation and identification...	1 to 3 wk.	Polystyrene container....	Frozen (dry ice).....	Air express.
	Serum, acute and convalescent--5 ml.	Serum neutralization.....	1 to 3 wk.			
Johne's disease...	Ileocecal valve and adjacent 6 inches of intestine and adjacent mesenteric lymph node.	Isolation from suspect tissue.....	3 wk. to 4 mo.	Polystyrene container....	Frozen (dry ice).....	Air express.
	Feces - 1/2 ounce.....	Isolation from feces.....	4 ml.	1 ounce ointment tin in Polystyrene container.	None.....	Air express.
	Serum (cell free)--2 ml.....	CF test (on cattle for export or on special request).	3 days.	Polystyrene container....	Frozen (dry ice).....	Certified airmail.
	Cultures and smears.....	Identification of isolants.....	1 to 3 mo.	Double mailing container, inner tube metal.	None.....	Certified airmail.
	Sections from ileocecal valve, rectum, and adjacent mesenteric lymph nodes (6 sections not over 4 mm. thick).	Histologic examination.....	1 hr. to 3 days.	Polystyrene container....	10% buffered formalin.....	Airmail.
Leptospirosis.....	Serum (clot removed) 3 ml. for export. Serums (acute and convalescent) 3 ml.--for diagnosis.	Agglutination—lysis.....	72 hr.	Polystyrene container....	Frozen (dry ice) or refrigerated (ice can).	Certified airmail.
Newcastle disease.	Lung, brain, tracheal exudate, spleen, proventriculus, intestines, liver, gall bladder, heart.	Virus isolation and identification...	1 to 3 wk.	Metal can enclosed in polystyrene container.	Frozen (dry ice).....	Air express.
	Serum, acute and convalescent--5 ml.	Serum neutralization.....	1 to 3 wk.	Metal can enclosed in polystyrene container.	Frozen (dry ice).....	Air express.
Ornithosis.....	Sterile technique is a must. Fowl—kidney, spleen (sterile). Cattle--spleen, liver, brain (sterile). Sheep--lungs, spleen, synovial fluid, intact joints (sterile).	Agent isolation and identification...	1 to 3 wk.	Polystyrene container....	Frozen (dry ice).....	Air express.
	Paired serums, acute and convalescent--5 ml. (all species).	Complement fixation.....	1 to 2 wk.			
Pseudorabies and Enteroviruses.	Tonsil, 1/2 of the brain, 3/4 of spinal cord.	Fluorescent antibody virus isolation and identification.	24 to 48 hr. 3 wk. for enterovirus.	Polystyrene container....	Frozen (dry ice).....	Air express.
	Paired serums, acute and convalescent 5 ml.	Serum neutralization.....	1 to 2 wk.	Polystyrene container....	Frozen (dry ice).....	
	1/2 of brain.....	Histopathologic examination.....	1 hr. to 3 days.	Polystyrene container....	10% formalin.....	
Salmonellosis (including Arizona).	Cultures only, submitted on nutrient agar slants in screw-cap tubes.	Serotyping.....	1 wk.	Double mailing container (metal inside).	None.....	Regular mail or airmail.
Scrapie.....	Brain stem and cerebellum.....	Histologic examination.....	2 days to 1 wk.	Polystyrene container (sent on request).	10% buffered formalin.....	Air express.
	Cerebrum.....	Mouse inoculation.....	Up to 24 mo.	Polystyrene container (sent on request).	Frozen (dry ice).....	Air express.
Shipping fever (parainfluenza 3).	Lung, bronchial lymph nodes, nasal exudate or washings collected in heart infusion broth or other protein solution.	Virus isolation and identification...	1 to 3 wk.	Polystyrene container....	Frozen (dry ice).....	Air express.
	Serums, acute and convalescent, 5 ml.	Hemagglutination - inhibition.....	1 to 2 days.	Polystyrene container....	Frozen (dry ice).....	Air express.

Toxic conditions: (Heavy metals)...	Liver, kidney (1/4 lb.), urine (all available up to 100 ml.), stomach contents (1/2 pint).	Chemical analysis.....	1 to 4 wk.	Polystyrene container....	Frozen (dry ice).....	Air express.
	Liver, kidney and brain.....	Histologic examination.....		Polystyrene container....	10% buffered formalin.....	Air express.
(Plant poisons).	Liver, kidney (1/4 lb), urine - all available up to 100 ml., stomach contents (1/2 pint).	Chemical analysis	1 to 2 wk.	Polystyrene container....	Frozen (dry ice).....	Air express.
	Liver, kidney, and brain.....	Histologic examination.....		Polystyrene container....	10% buffered formalin.....	Air express.
(insecticidea)..	Liver (1/2 lb) and fat (1/4 lb)....	Chemical analysis.....	1 to 2 wk.	Polystyrene container....	Frozen (dry ice).....	Air express.
	Liver, kidney, and brain.....	Histologic examinations.....		Polystyrene container....	10% buffered formalin.....	Air express.
(Urea, nitrate and ammonia).	Heparinized blood (25 ml.) Liver (1/4 lb), stomach contents (at least 1/2 pint).	Chemical analysis.....	3 to 5 days.	Polystyrene container....	Frozen (dry ice) except blood-- refrigerated (ice can).	Air express.
	Liver, kidney, brain, and lung.....	Histologic examination.....		Polystyrene container....	10% buffered formalin.....	Air express.
(Salt).....	Serum (5 ml.), cerebral spinal fluid (all available), heparinized blood (20 ml.).	Chemical analysis.....	2 days.	Polystyrene container.....	Refrigerated (ice can).....	Air express.
	Brain.....	Histologic examination.....		Polystyrene container....	10% buffered formalin.....	Air express.
(Miscellaneous)	Liver, kidney, and spleen (1/2 lb), heparinized blood (25 ml), urine - all available up to 100 ml.), stomach contents (1/2 pint).	Chemical analysis.....	1 to 4 wk.	Polystyrene container....	Frozen (dry ice) except blood-- refrigerated (ice can).	Air express.
	Liver, kidney, lung, heart and brain	Histologic examination.....		Polystyrene container....	10% buffered formalin.....	Air express.
Tuberculosis: (Culture).....	Affected tissues and associated regional lymph nodes.	Culture.....	6 to 8 wk.	Polystyrene container (sent on request).	Chloramine T (sent on request) shipped refrigerated (ice can).	Air express.
	Culturea.....	Bacteriological examination, biochemical and serologic identification.	6 to 8 wk.	Double mailing container (inner tube metal).	None.....	Certified mail.
(Histopathology)	Lesions and adjacent normal tissue.	Histologic examination.....	1 hr. to 3 days.	Polystyrene container....	10% buffered formalin.....	Air express.
Vesicular stomatitis	SINCE VESICULAR DISEASES CANNOT BE DIFFERENTIATED BY CLINICAL SIGNS, ANY CASE SUSPECTED OF BEING VESICULAR STOMATITIS SHOULD BE REPORTED IMMEDIATELY TO THE NEAREST STATE OR FEDERAL ANIMAL DISEASE REGULATORY OFFICIAL. A SPECIALLY TRAINED FOREIGN ANIMAL DISEASE DIAGNOSTICIAN WILL INVESTIGATE THE REPORTS AND DETERMINE WHETHER SPECIMENS SHOULD BE COLLECTED FOR LABORATORY TESTS.					
Miscellaneous bacterial conditions (Listerosis, Erysipelas, Vibriosis, Salmonellosis, etc.)	Liver, lung, kidney, spleen, brain, intestine (approx. 3 in., tied at cut ends).	Culture of tissues	1 to 4 wk.	Each tissue in a separate plastic bag (identified) in ploystyrene container.	Refrigerated (ice can).	Air express.
	Cultures in screw-cap tubes.....	Identification of cultures.....	1 to 4 wk.	Double mailing container (inner tube metal).	None.....	Certified mail.
Miscellaneous viral diseaaes.	Tissues believed to contain highest concentration of virus.	Virus isolation and identification (by tissue culture, embryonated eggs or animal inoculation).	2 to 4 wk.	Polystyrene container....	Frozen (dry ice).....	Air express.
	Serums, acute and convalescent, 10 ml.	Serum neutralization (as appropriate).	2 to 4 wk.	Polystyrene container....	Frozen (dry ice).....	Air express.
Miscellaneous conditions not listed above.	Contact Veterinarian in Charge of State of origin.	Dependent upon condition suspected.				

CLEANING AND DISINFECTING

The Nature of

Disinfection is the chemical destruction of pathogenic organisms. For destruction, there must be contact.

There can be no contact of disinfectant with organism through organic debris. Disinfection, therefore, must be preceded by cleaning. Cleaning is the thorough mechanical removal of gross waste.

Without effective cleaning and disinfecting, there may be no eradication of disease.

Responsibility for

Accredited veterinarians engaged in disease control programs have a responsibility to see that trucks, equipment, and premises are cleaned and disinfected. At the time reactors are tagged, branded, and appraised, it is the duty of the accredited veterinarian to explain in detail and to demonstrate to the farmer or the trucker the proper cleaning of premises, equipment, and vehicles.

Steps in

- All bedding, manure, and accumulated waste should be removed.
  Surfaces should be scrub-brushed with soap and water, any good alkaline detergent in warm water, or lye at the rate of one 13-ounce can to 5 gallons of water.
  Lye should remain in contact with surfaces for 24 hours.
- Surfaces are flushed with clean water and a disinfectant applied, preferably with pressure spray at 90 to 120 pounds' per square inch.

Precautions in Use

Lye.--Lye is very caustic. It will burn skin and corrode metal. It should be handled carefully. Rubber boots should be worn. Lye will destroy many micro-organisms and is a good cleaning agent. However, it is not effective against the tubercle baccillus and is not a permitted disinfectant against tuberculosis.

Sodium orthophenylphenate.--For effective disinfection this solution must be applied at a temperature of 60^{o} F. or higher. Whenever the temperature falls below 60^{o} the solution must be heated to at least 120^{o}. This material is not effective when preceded by cleaning with sodium hydroxide (lye) or other highly alkaline solutions. Containers should be tightly closed to prevent deterioration.

Spray equipment.--When mechanical spray equipment is used for disinfecting, the electricity in the building always should be disconnected. This is a safety precaution to prevent fire and to prevent possible electrocution of the operator.

Recommended Spray Mixtures

Disinfectant	Percent solution	Mixtures	Disease
Cresylic [1]	4	4 oz. to 1 gal. water.	Brucellosis. Fowl plague. Hog cholera. Newcastle disease. Shipping fever. Swine erysipelas. Tuberculosis. Vesicular exanthema. Vesicular stomatitis.
Sodium carbonate (soda ash)	4	1 lb. to 3 gal. water.	Foot-and-mouth disease. Scrapie.
Sodium hydroxide (lye) Caustic soda	2	13½ oz. can to 5 gal. water.	Hog cholera. Foot-and-mouth disease. Scrapie.
Sodium orthophenylphenate (USDA approved)	1 2	1 lb. to 12 gal. water. 2 lbs. to 12 gal. water.	Brucellosis. Fowl plague. Hog cholera. Newcastle disease. Tuberculosis. Vesicular exanthema. Vesicular stomatitis.
Sodium hydroxide (lye)	5	5 (13½ oz.) cans to 10 gal. water.	Anthrax. Blackleg.

See Code of Federal Regulations, Title 9, Part 71.10 and permitted list under ANH Division Memorandum No. 586.1.

IMPORTATION OF BYPRODUCTS

Regulations

Imported meats, animal byproducts, and related materials may be a means of introducing foreign animal diseases into the United States. The Department of Agriculture has regulations governing the importation of such products designed to minimize this risk. These regulations are administered by the Animal Health Division. They are covered in The Code of Federal Regulations, Title 9, in the following parts:

Part 94--Rinderpest, foot-and-mouth disease, fowl pest (fowl plague), Newcastle disease (avian pneumoencephalitis) and African swine fever. Prohibited and restricted importations--prohibits the importation of cattle, sheep, other ruminants, or swine, or of fresh, chilled, or frozen meat of ruminants and swine from any country declared by the Secretary of Agriculture to be infected with foot-and-mouth disease or rinderpest. The regulation also has sanction in Federal law, Section 306a of the Act of June 17, 1930.

- Part 95--Sanitary control of animal byproducts (except casings), and hay and straw, offered for entry into the United States.
- Part 96--Restrictions of importations of foreign animal casings offered for entry into the United States.

Animal Products

Each year millions of pounds of animal products and related materials are imported for agricultural and industrial purposes from all over the world. These include hides and skins, wool, hair, bristles, bones, bonemeal, horns, hoofs, tankage, bloodmeal, and finished pharmaceuticals prepared from animal glands and other materials.

The Division is concerned with those products that come from countries where rinderpest, foot-and-mouth disease, or African swine fever is known to be present. Accordingly, unless effective and acceptable processing has been done in the country of origin, animal products from the infected countries are permitted entry only under restrictions.

In the case of bone, horns, hoofs, and bonemeal--usually imported for agricultural uses--there is the additional risk of anthrax. Since anthrax is present throughout the world, to prevent its further incidence in U.S. livestock, all bones and bone products are permitted entry under restrictions.

Entry under restrictions is meant:

- Inspection of cargo at dockside.
- Supervision of the loading of the restricted products on railroad cars or motor trucks.
- Sealing transporting vehicles with government seals.
- Release of shipments to processing establishments previously approved by ANH Division.

IMPORT--ANIMALS, ANIMAL SEMEN, POULTRY, AND HATCHING EGGS

Regulations

The Department of Agriculture's regulations administered by ANH Division to prevent the introduction of foreign animal diseases into the United States are contained in the following parts of The Code of Federal Regulations, Title 9:

- Part 92--Importation of certain animals, animal semen, poultry, and hatching eggs.
- Part 94--Rinderpest, foot-and-mouth disease, fowl pest (fowl plague), Newcastle disease (avian pneumoencephalitis), and African swine fever: Prohibited and restricted import animals including poultry.

Purpose

These two regulations are evidence of an alertness to the dangers accompanying the importation of certain animals, animal semen, poultry, and hatching eggs. There is increasing awareness of the potential risk from various diseases, such as foot-and-mouth disease, rinderpest, contagious bovine pleuropneumonia, African horsesickness, African swine fever, East Coast fever, heartwater, fowl plague, exotic strains of Newcastle disease, and others, including the tick-borne diseases.

Animals Governed by Import Regulations

Cattle, sheep, goats, and other ruminants (animals that chew the cud, such as buffalo, deer, antelope, camels, and llama); also domestic swine and all varieties of wild hogs, horses, burros, mules, zebras, and poultry (including chickens, ducks, geese, swans, turkeys, pigeons, doves, pheasants, grouse, partridges, quail, guinea fowl, and pea fowl of all ages, and eggs for hatching purposes).

Prohibited Imports

Current legislation prohibits the importation of cattle, other ruminants, and swine from any country declared by the Secretary of Agriculture to be infected with foot-and-mouth disease or rinderpest. Regulations specify that wild ruminants from such countries may be imported into the United States and outline the manner in which they may enter. Such animals may be imported for exhibition only and are maintained under permanent post-entry control in zoos specifically approved by ANH Division for the Department.

Cattle are also prohibited entry from any country where contagious bovine pleuropneumonia exists, such as Australia; and from cattle fever tick-infested areas, such as countries in Central America and the islands of the Caribbean. There are legal provisions for certain tick-free cattle to move from tick-infested areas of Mexico into Texas and from the British Virgin Islands into the U.S. Virgin Islands.

Ports of Entry

To provide for the orderly importation of animals and poultry and for veterinary inspection service, the Department has designated ports of entry--16 air and ocean, 54 along the Canadian border, and 17 along the Mexican border. Importations must be made through these designated ports, except in special cases when the Director of the Division may designate other ports with the concurrence of the Secretary of the Treasury.

Quarantine Stations

The Department of Agriculture owns and operates the "Athenia" quarantine station for the quarantine of animals and poultry entering the United States at the port of New York. At other ports of entry, when quarantine is required, it is the responsibility of the importer to arrange for quarantine facilities subject to the approval of ANH Division. The importer must also arrange with port veterinarians at the New York and Miami stations for space. The Division operates and leases the Miami facility from the local port authority.

Basic Import Requirements

An import permit must be obtained by the importer from the Hyattsville, Md. Office of ANH Division before animals and poultry are potentially eligible for importation from the country of origin.

Permits are not usually required for animals, or animal semen, or poultry from Canada (unless they have been in countries other than Canada or the United States), for horses from any country, or for ruminants and swine from the eight northern States of Mexico. However, a permit is necessary on air shipments from Canada.

Certification by a salaried veterinary officer of the national government of the country of origin showing freedom from disease and exposure thereto must accompany shipment to the port of entry.

Veterinary inspection must be given at the port of arrival in the United States.

Quarantine, when required, must be completed for a specified minimum period at the port of entry (21 days for poultry, 30 days for ruminants or swine, and 60 days for equine stock from African horsesickness infected countries). New York City is the only port where equine stock from African horsesickness infected countries may be quarantined.

Inspection at Port of Entry

Veterinary examination of the animals and poultry is given by an ANH veterinarian at the port of entry. All animals found to be free from communicable disease, and not exposed thereto within 60 days prior to the offer for importation, may be admitted subject to various other provisions.

All necessary accompanying papers, such as certificates, documents, and test charts, must be accurate and complete before importation is permitted.

Specific Animals

- Domestic ruminants must be accompanied by a health certificate and, when applicable, a test chart showing negative results to tests for tuberculosis and brucellosis.
- Horses from most countries must show negative results to dourine and glanders tests on blood samples collected at the U.S. port of entry.
- Dogs subject to the Department's regulations are collie, shepherd, and similar breeds intended for use in the handling of livestock. To determine their freedom from Multiceps multiceps, such dogs, except those from Canada, Mexico, and countries of Central America and the West Indies, are examined at the port of entry.
- Wild ruminants and swine (zoo animals) may be imported from foot-and-mouth disease or rinderpest-infected countries, but rigid requirements have been established. One of these is that following release from quarantine the animals must be consigned only to a Department-approved Zoo operating under acceptable standards and under appropriate supervision.

Precautionary Treatment

Certain precautionary treatments of animals against external parasites and the disinfection of accompanying equipment and litter are carried out to further safeguard the livestock of this country.

EXPORT BYPRODUCTS

The Department of Agriculture regulations administered by the ANH Division for the certification of inedible animal byproducts is contained in Part 156--Inspection and Certification of Animal Byproducts. An explanation of these regulations appears in ANH Division Memorandum 594.1 Certification of Inedible Animal Products.

This regulation provides for the inspection and certification of the class, quality, quantity, and condition of inedible animal byproducts, upon request. It also provides authority for the Department to foster and assist in the development of new and expanded markets, both domestic and foreign, and in the movement of agriculture products to consumers in the United States and abroad. Under the provisions of the regulations, ANH Division inspectors are authorized on a reimbursable basis to issue and endorse sanitary certificates to accompany shipments of animal byproducts such as, but not limited to, hides, meat meal, tankage, bonemeal, bones, blood products, feather meal, and inedible tallow.

In order for an ANH Division representative to properly issue or endorse these sanitary certificates he must know the import requirements of the country of destination. It is also necessary that the operation of the processing plant be under direct supervision of an employee authorized by this Division to perform such inspection service. Only certificates that contain statements that are known to be factual are to be issued and endorsed by representatives of this Division.

This regulation also provides for additional supervision beyond that which can be furnished by the Meat Inspection programs, Consumer and Marketing Service (C&MS), involving the disposition of inedible or condemned materials. These materials are processed under supervision of the ANH Division or meat inspection personnel on a reimbursable basis for the preparation of canned pet food and other commercial products.

EXPORT ANIMALS

Regulations

Regulations governing the "Inspection and Handling of Livestock for Exportation" are contained in Part 91. These are minimum requirements and take precedence over the import regulations of the receiving foreign country if the latter are less restrictive.

Purpose

- To promote foreign trade by insuring, as far as possible, that only sound and healthy animals are exported.
- To provide for humane handling and safe transport.

Animals Governed by Export Regulations

Export regulations of the Department are applicable to cattle, sheep, goats, swine, horses, mules, and burros.

When required by the import regulations of the receiving country, certain other animals, poultry, and hatching eggs may be inspected and a health certificate issued.

Foreign Import Requirements

The ANH Division is familiar with the import requirements of some English-speaking countries. However, requirements of other countries are difficult to maintain. It is the responsibility of the exporter to obtain current information concerning import regulations of the receiving country. Since most foreign countries require that a permit or license be issued by them before animals may be imported, the requirements that are applicable to a proposed importation are usually included when the permit or license is issued. Whenever it is determined there are a number of health requirements by a foreign country the accredited veterinarian should contact the ANH Division Veterinarian In Charge if there is any doubt about the animals meeting the requirements.

Inspection at Origin

Veterinary inspection of animals intended for shipment to a foreign country must be made at origin by an accredited veterinarian, a full-time, State-employed veterinarian, or an ANH veterinarian. However, the receiving country may require inspection and certification by an ANH veterinarian. This is true for sheep and goats destined to Canada. Test charts and health certificates should be completed and issued in accordance with specific instructions.

Department export regulations require that all dairy and breeding cattle, except calves born after test of the dam, be tuberculin tested with negative results within 30 days from the date of shipment from the U.S. point of origin.

All cattle (bulls and females) over 6 months of age (except officially brucellosis-vaccinated female dairy cattle under 20 months of age, and officially vaccinated female cattle of the beef breeds under 24 months of age) must be blood tested for brucellosis with negative results in dilution of 1:50 and above within 30 days from date of shipment from the U.S. point of origin.

Besides the tuberculin and brucellosis tests, some countries require other tests for diseases such as paratuberculosis and anaplasmosis. If made, the kind and results of these tests should be clearly shown.

An officially vaccinated animal is defined as a bovine animal of a dairy breed vaccinated against brucellosis from 3 to 8 months of age--or a bovine animal of a beef breed in a range or semi-range area, vaccinated against brucellosis from 3 to 10 months of age--under the supervision of a Federal or State Veterinary official, with a vaccine approved by the Animal Health

Division, ARS, USDA; permanently identified as a vaccinate and reported at the time of vaccination to the appropriate State and Federal agencies cooperating in the eradication of brucellosis.

Officially vaccinated female dairy cattle 20 months of age and older, and officially vaccinated female cattle of the beef breeds 24 months of age and older, must be blood tested for brucellosis with negative results in dilution of 1:100 and above.

NOTE: Canada does not consider the brucellosis vaccination of any animal official unless it was vaccinated between 3 and 9 months of age. If vaccinated after the day the animal becomes 9 months old, it is not official. The exact date of vaccination must be shown on the certificate.

The tuberculin test and the brucellosis test may be waived by the Director of the Animal Health Division when so requested by a responsible official of the country of destination, if the Director feels that it can be done without endangering the livestock export trade of the U.S.

Health Certificate

A United States Origin Health Certificate is designed for shipments of livestock to foreign countries. Health certificates record the veterinary health inspection of export animals at point of origin and contain appropriate information about the diagnostic tests that were completed.

In addition, health certificates should show any vaccinations or immunizations given immediately prior to shipment, with appropriate dosage product used, and date administered clearly indicated.

Completing Certificates

Certificates accompanying animals to port of export shall show proper identification of the animals in the shipment with respect to breed, sex, and age in date of birth, and, when applicable, shall also show registration name and number, tattoo markings, tag number, or other natural or acquired markings.

The correct date of issuance of the certificate should be indicated. This should coincide with the date of actual inspection of the animals.

Only true statements should be made. Unsubstantiated statements such as "these animals are free of all diseases" are not acceptable.

Names and addresses of consignor and consignee must be shown.

Port of export, and country of destination, must be clearly shown.

Endorsement of Health Certificates

All copies of the completed certificate, as one of the necessary export requirements, shall be endorsed by the ANH veterinarian in charge in the State of origin, or by another ANH veterinarian so authorized by the Director of the Division.

IMPORTANT: All copies of certificates must be legible and complete before they can be properly endorsed.

Transportation

Department regulations require that all animals intended for export be moved from premises of origin to a port of export in cleaned and disinfected trucks, railroad cars, or other conveyances unless such conveyances were not previously used to transport livestock. Crates must be constructed of new material, or if previously used to transport livestock must first be cleaned and disinfected.

Reinspection and Certification at Port of Export

Animals destined to a foreign country are given veterinary inspection at ports of export specified by regulation, except that such reinspection of livestock destined overland to Canada and Mexico is the responsibility of the salaried veterinarians of those governments. If the animals are accompanied by properly executed and endorsed health certificate, and the ANH port veterinarian finds the animals to be free from evidence of communicable disease and exposure thereto, he may issue a specific export certificate to that effect (except in the case of Canada and Mexico), which accompanies the animals to destination. Issuance of the export certificate is based upon the port veterinarian's inspection of the animals and his examination of the documents accompanying the shipment. The law precludes clearance of an ocean vessel or airplane with livestock aboard until the export certificate has been issued.

Export Animals, Poultry and Hatching Eggs--Special Requirements

Animals.--Some special requirements for movement of animals from the United States should be noted:

- Except for immediate slaughter, all sheep and goats destined for Canada must be inspected and the necessary certificates issued at the point of origin by an ARS veterinarian.
- Cattle for rodeos, circuses, or other similar entertainment purposes, must be accompanied by a health certificate properly issued and endorsed within the preceding 3 months for reentry into the United States. Diagnostic tests are not required for such animals.

Poultry and Hatching Eggs--This Department does not have regulations applicable to the export shipment of poultry and eggs; therefore, such shipments are governed by the import regulations of the receiving country.

Canadian authorities have approved a specific certificate (ANH form 17-35) for poultry and hatching eggs from the United States. These certificates may be obtained from the ANH Veterinarian In Charge in the State of origin, who must also endorse them when completed. Inspection and certification for poultry and hatching eggs destined for Canada may be done by an accredited veterinarian. A summary of other requirements necessary to meet Canadian import regulations for poultry is contained on the reverse side of the certificate.

Mexican import regulations contain the requirement that a prior permit for livestock, poultry, and hatching eggs be obtained from the Ministry of Agriculture, Mexico, D.F., Mexico. They also require that health certificates accompanying such shipments to Mexico be visaed by a Mexican consular officer nearest the point of origin.

IMPORTANT--ARS personnel authorized to endorse certificates for export animals and poultry have been instructed not to do so unless the certificates have been:

- Issued by an accredited veterinarian, State veterinarian, or Federal veterinarian.
- Properly executed and there is reason to believe that all statements are accurate and factual insofar as can be determined and are not misleading or worthless.

ORGANISMS AND VECTORS

Organisms such as bacteria and viruses are being used in increasing numbers in research on both human and animal diseases. Department of Agriculture regulations state that no organism (which may introduce or disseminate any contagious or infectious disease of animals) or vector of such organism may be imported into the United States or be moved from one State to another without a permit from the Department of Agriculture and in compliance with the terms thereof. The purpose of this regulation is to ensure that such agents are handled in a manner that will not endanger the health of our domestic livestock population.

Specifically, a permit must be obtained prior to the importation of any organism, even though the same organism occurs naturally in the United States. However, it would be impractical to require a prior permit for movement within the U.S. of all animal pathogens that naturally occur in this country. The general policy is to require a permit for organisms for which eradication programs are being conducted, as well as for any other highly virulent organism. The viruses causing vesicular stomatitis, bluetongue, equine infectious anemia, scrapie, and hog chlorea are examples of agents for which permits are required for interstate movement. Although eradication programs are being conducted, permits are not required for the interstate shipment of brucellosis or tuberculosis organisms at the present time. Various newly isolated agents may be placed in the restricted category until their significance and distribution are known. Before shipping any organism, it is wise to consult with the Animal Health Division Veterinarian in Charge in your state to determine if a shipping permit will be necessary.

Importation into the U.S. of the live virus of foot-and-mouth disease is prohibited by Federal law. In addition, because the agents of diseases such as African swine fever, rinderpest, contagious bovine pleuropneumonia, African horsesickness, and several other foreign animal diseases are considered too dangerous to study in the United States, the USDA does not permit their importation.

When reviewing applications for permits, major factors considered are: The agent itself, the source of the agent, the qualifications of the individual requesting the agent, the proposed use of the agent, and the laboratory facilities where the agent will be studied. Inspections of facilities to determine that security provisions are adequate are often made by Animal Health Division veterinarians prior to issuing permits. Permits, when issued, may stipulate certain conditions under which the agent may be studied; e.g., in vitro studies only, incineration of all wastes, etc., as additional safeguards to protect the surrounding livestock population.

In addition to requiring permits for the movement of organisms and vectors, authorization is required for the importation of all animal material, including diagnostic specimens such as tissue, blood, serum, etc. Such material could unknowingly be infected with dangerous animal disease agents and must therefore be handled in a manner that precludes the possibility of infecting domestic livestock.

Disease agents and vectors indigenous to all States and diagnostic specimens from animals known to be or suspected of being infected with such agents usually may be moved interstate without prior permit.

Code of Federal Regulations, Title 9, Chapter 1,
Subchapter 1, as amended February 14, 1970

Title 9—ANIMALS AND ANIMAL PRODUCTS

Chapter I—Agricultural Research Service, Department of Agriculture

SUBCHAPTER I—ACCREDITATION OF VETERINARIANS AND SUSPENSION OR REVOCATION OF SUCH ACCREDITATION

STANDARDS FOR ACCREDITED VETERINARIANS AND RULES OF PRACTICE

On October 13, 1967, there was published in the FEDERAL REGISTER (32 F.R. 14225) a Notice of Proposed Standards for Accredited Veterinarians and Rules of Practice to be added as a new Subchapter I to Chapter I of Title 9, Code of Federal Regulations. After due consideration of all relevant material submitted with respect to such proposal, and pursuant to the provisions of sections 3, 4, 5, 6, 11, and 13 of the Act of May 29, 1884, as amended, section 10 of the Act of August 30, 1890, sections 1 and 2 of the Act of February 2, 1903, as amended, section 3 of the Act of March 3, 1905, as amended, the Act of March 4, 1907, the Act of July 24, 1919, the Act of May 31, 1920, and sections 3 and 11 of the Act of July 2, 1962 (21 U.S.C. 80–86, 89, 96, 105, 111–113, 114, 114a, 114a–1, 115, 116, 120, 121, 125, 134b, and 134f), said Standards and Rules of Practice are hereby issued. Subchapter I is hereby added to Chapter I, Title 9, Code of Federal Regulations to read as follows:

SUBCHAPTER I—ACCREDITATION OF VETERINARIANS AND SUSPENSION OR REVOCATION OF SUCH ACCREDITATION

PART 160—DEFINITION OF TERMS

Sec.

160.1 Definitions.

PART 161—REQUIREMENTS AND STANDARDS FOR ACCREDITED VETERINARIANS AND SUSPENSION OR REVOCATION OF SUCH ACCREDITATION

161.2 Standards for accredited veterinarians.
161.3 Revocation of veterinary accreditation.

PART 162—RULES OF PRACTICE

Sec.

162.1 Institution of proceedings.
162.2 Hearing; request for formal hearing; hearing procedure; procedure upon admission of facts and waiver of hearing; hearing officer's report; exceptions to hearing officer's report; preparation and issuance of final order.
162.3 Service and proof of service.

AUTHORITY: The provisions of this Subchapter I issued under 23 Stat. 32, as amended; 58 Stat. 734, as amended; 65 Stat. 693; 26 Stat. 417; 32 Stat. 791, 792, as amended; 33 Stat. 1265, as amended; 34 Stat. 1263, 1264; 41 Stat. 241; 41 Stat. 699; 76 Stat. 130, 132; 21 U.S.C. 80–86, 89, 96, 105, 111–113, 114, 114a, 114a–1, 115, 116, 120, 121, 125, 134b, 134f.

SUBCHAPTER I—ACCREDITATION OF VETERINARIANS AND SUSPENSION OR REVOCATION OF SUCH ACCREDITATION

PART 160—DEFINITION OF TERMS

§ 160.1 Definitions.

For the purposes of this subchapter the following words, phrases, names, and terms shall be construed, respectively, to mean:

(a) *Division.* The Animal Health Division, Agricultural Research Service, U.S. Department of Agriculture.

(b) *Director.* The Director of the Division, or any other official of the Division to whom authority has heretofore been delegated or may hereafter be delegated to act in his stead.

(c) *State.* Any State, Territory, the District of Columbia or the Commonwealth of Puerto Rico.

(d) *Accredited Veterinarian.*[1] A veterinarian approved by the Director in accordance with the provisions of Part 161 of this subchapter to perform functions specified in Subchapters B, C, and D of this chapter.

(e) *Veterinarian-in-Charge.* The veterinary official of the Division who is assigned by the Director to supervise and perform the official work of the Division in the State where the veterinarian concerned is accredited or wishes to be accredited.

(f) *State Animal Health Official.* The animal health official responsible for the livestock and poultry disease control and eradication programs of the State in which the veterinarian is accredited or wishes to be accredited.

PART 161—REQUIREMENTS AND STANDARDS FOR ACCREDITED VETERINARIANS AND SUSPENSION OR REVOCATION OF SUCH ACCREDITATION

§ 161.1 Requirements for accreditation.

[1] The provisions of Subchapters B, C, and D of this chapter authorize Federal and state veterinarians and accredited veterinarians to perform specified functions. Full time Federal (including military) and state veterinary employees are authorized to perform such functions without specific accreditation under the provisions of this subchapter.

(a) The Director is hereby authorized to accredit a veterinarian when he determines that such veterinarian (1) is a graduate of a college of veterinary medicine; (2) is licensed to practice veterinary medicine in the State in which he wishes to be accredited; (3) has made formal application for accreditation on Form 1–36A, "Application for Veterinary Accreditation"; (4) has passed an examination administered by the Division; and (5) has been jointly recommended by the State Animal Health Official and the Veterinarian-in-Charge in the State in which the veterinarian wishes to be accredited.

(b) The Director is hereby authorized to accredit a veterinarian whose accreditation has been revoked when he determines that such veterinarian (1) is licensed to practice veterinary medicine in the State in which he wishes to be accredited; (2) has made formal application for accreditation on Form 1–36A, "Application for Veterinary Accreditation"; and (3) has been jointly recommended by the State Animal Health Official and the Veterinarian-in-Charge in the State in which the veterinarian wishes to be accredited.

§ 161.2 Standards for accredited veterinarians.

An accredited veterinarian shall perform official duties in accordance with the following standards:

(a) Prior to completing and signing a certificate with respect to animals or poultry, the accredited veterinarian shall individually inspect such animals or poultry in accordance with professionally accepted procedures.

(b) Certificates, forms, and reports shall be accurately and fully completed, including identification of animals, and shall be distributed according to instructions issued to him by the State Animal Health Official or the Veterinarian-in-Charge, or both.

(c) Official tests and vaccinations shall be applied according to procedures and standard techniques prescribed by the State Animal Health Official or the Veterinarian-in-Charge, or both.

(d) Certificates issued by an accredited veterinarian that reflect results of tests performed by another accredited veterinarian shall clearly indicate the name of the veterinarian conducting the tests, the place where the tests were conducted, and the date and results of the tests.

(e) Reactor animals disclosed by tests shall be identified within prescribed time limitations and according to State-Federal instructions issued to him by the State Animal Health Official or the Veterinarian-in-Charge, or both.

(f) All diagnosed or suspected cases of diseases of livestock or poultry named in § 71.3 (a) and (b) of Part 71, Subchapter C, of this chapter, including any vesicular conditions, shall be reported immediately to the appropriate State Animal Health Official or the Veterinarian-in-Charge.

(g) Professionally accepted sanitary procedures shall be followed to minimize the danger of spread of disease between animals and between premises.

(h) The accredited veterinarian shall keep himself currently informed on State and Federal policies, regulations, and procedures concerning livestock disease control and eradication and shall advise livestock owners, shippers, and other interested parties accordingly.

(i) Official duties and activities of an accredited veterinarian in a State shall be performed subject to supervision and direction of the appropriate State Animal Health Official and the Veterinarian-in-Charge.

§ 161.3 Suspension or revocation of veterinary accreditation.

(a) The Director is authorized to suspend for a given period of time, or to revoke, the accreditation of a veterinarian when he determines that the accredited veterinarian has not complied with the "Standards for Accredited Veterinarians" as set forth in § 161.2, or in lieu thereof to issue a written notice of warning to the accredited veterinarian when the Director determines that the failure to comply with said standards constitutes a minor violation and that it appears that a notice of warning will be adequate to attain compliance with the Standards.

(b) Any suspension or revocation of accreditation for failure to comply with the Standards shall be applicable in all States in which the veterinarian is accredited.

(c) Accreditation in a given State shall be automatically terminated when an accredited veterinarian's license to practice veterinary medicine in that State is terminated.

PART 162—RULES OF PRACTICE

§ 162.1 Institution of proceedings.

(a) *Complaint.* A complaint in writing shall be issued by the Veterinarian-in-Charge and served on the accredited veterinarian, whenever there is reason to believe that he has not complied with the "Standards for Accredited Veterinarians" as contained in § 161.2 of this subchapter. The complaint shall state briefly and clearly the allegations of fact which constitute the basis for the proceeding and shall specify the "Standards" alleged to have been violated. At any time prior to the close of the hearing the complaint may be amended; but, at the request of the accredited veterinarian, the hearing shall be adjourned for a period not exceeding 15 days.

(b) *Answer.* The accredited veterinarian shall file with the Veterinarian-in-Charge an answer to the complaint within 20 days after service of the complaint. Such answer shall be signed by the accredited veterinarian or his attorney. Upon request by the accredited veterinarian and where the circumstances warrant, the Director may extend the period of time for filing of the answer. The answer shall contain a statement of the facts which constitute the grounds of defense and shall specifically admit, deny, or explain each of the allegations of the complaint. The answer may be supported by such affidavits, depositions or other documents which the accredited veterinarian desires to submit. Failure to file an answer to or plead specifically to any allegation of fact in the complaint shall constitute an admission of such allegation.

(c) *Suspension of accreditation pending final determination.* When the Director deems such action necessary in order to adequately protect the public health, interest, or safety, he may suspend the accreditation of an accredited veterinarian pending final determination in the matter.

(d) *Informal conference and consent orders.* At the request of the accredited veterinarian, the Veterinarian-in-Charge, with the concurrence of the State Animal Health Official, will arrange an informal conference to discuss the matter, at the time and place designated by the Veterinarian-in-Charge. The accredited veterinarian may bring with him to the conference any representative or other person whom he desires. If the accredited veterinarian, in writing, admits the facts alleged in the complaint, or states that he neither admits nor denies the facts alleged in the complaint, and consents to the issuance of an order revoking his accreditation, such an order will be issued without further procedure.

§ 162.2 Hearing; request for formal hearing; hearing procedure; procedure upon admission of facts and waiver of hearing; hearing officer's report; exceptions to hearing officer's report; preparation and issuance of final order.

(a) *Request for formal hearing.* An accredited veterinarian may request a formal hearing on the allegations set forth in the complaint by including such request in the answer or by a separate request in writing filed with the Director. Failure to request a formal hearing at the conclusion of an informal appearance referred to in § 162.1(d) or within the time allowed for the filing of the answer, shall constitute a waiver of such hearing. If the accredited veterinarian does not request a formal hearing, the Director may order that such a hearing be held if he determines that a hearing is necessary to fully develope the facts.

(b) *Hearing Procedure.* Upon request by the accredited veterinarian for a formal hearing or upon the order of the Director, a hearing within 30 days shall be arranged. The following shall apply to such hearing:

(1) Notice of the time and place of such hearing shall be given to the accredited veterinarian in writing at least 10 days prior to the hearing.

(2) Such hearing shall be held before a hearing officer appointed by the Director.

(3) The parties may appear in person or by counsel or other representative.

(4) A representative of the Division shall proceed first at the hearing to present the facts upon which the complaint was based.

(5) The hearing officer shall be authorized to administer oaths and affirmations, examine witnesses at such hearing, and rule upon motions and requests.

(6) All testimony of witnesses at the hearing shall be upon oath or affirmation and subject to cross-examination. Any witness may, in the discretion of the hearing officer, be examined separate and apart from all other witnesses except the interested parties.

(7) The hearing officer may exclude obviously immaterial or irrelevant evidence, but the party offering such evidence may state what he expects to prove thereby.

(8) The hearing officer may postpone or adjourn a hearing for good cause shown.

(9) Oral argument will be permitted before the hearing officer at the close of the hearing and any argument advanced will be embodied in the record.

(10) A transcript shall be made of the hearing to which the hearing officer shall attach his certificate stating that the transcript is a true transcript of the hearing, except in such particulars as he shall specify, and that the exhibits accompanying the transcript are all the exhibits introduced at the hearing, with such exceptions as he shall specify.

(11) Written briefs or arguments may be submitted and made a part of the record if received by the hearing officer within 15 days after the close of the hearing. This period may be extended by the hearing officer for good cause shown.

(12) If the accredited veterinarian, after being duly notified, fails to appear at the hearing, he will have waived the right to a hearing.

(c) *Procedure upon admission of facts; waiver of hearing.* The admission, in the answer or by failure to file an answer, of all the material allegations of fact contained in the complaint shall constitute a waiver of hearing. Upon such admission of facts, unless the Director has ordered that a hearing be held, the hearing officer, without further procedure, shall prepare his report, in which he shall adopt as his proposed findings of fact the material facts alleged in the complaint.

(d) *The hearing officer's report.* The hearing officer, within a reasonable time after the termination of the period allowed for the filing of written briefs or arguments following the hearing, shall prepare upon the basis of the record and submit to the Director his report together with the record of the proceeding. Such report shall include recommended findings of fact and conclusions. A copy of the report shall be served upon the parties.

(e) *Exceptions to the hearing officer's report.* Within 15 days after the receipt of the hearing officer's report, exceptions thereto, and written arguments or a brief in support of such exceptions, may be filed with the Director. The Director may extend such period for good cause shown.

(f) *Preparation and issuance of order.* As soon as practicable after the termination of the period allowed for the filing of exceptions to the hearing officer's report, the Director, upon the basis of and after due consideration of the record, shall prepare his decision and order in the proceeding. Such decision and order shall be issued and served upon the parties and shall be the final and conclusive order in the proceeding.

§ 162.3 Service and proof of service.

Copies of all documents served upon a veterinarian whose accreditation is the subject of the proceeding shall be served in person or by certified mail. Proof of service shall be made by the affidavit of the person who actually made the service: *Provided,* That if the service is made by certified mail, proof of service shall be made by the return post office receipt. Such proof of service shall be made a part of the record of the proceeding.

The Department of Agriculture accredits veterinarians to perform certain functions under the regulations of the Department relating to the cooperative control and eradication of livestock and poultry diseases, the interstate transportation of certain animals and poultry and the exportation and importation of certain animals and poultry and products (9 CFR Chapter I, Subchapters B, C, and D). Copies of the standards of conduct required of such veterinarians are furnished to each veterinarian upon his accreditation.

The standards of conduct and rules of practice contained herein embody slight changes from the proposals in the notice of rule making. These changes are made for the purpose of clarification and uniformity of interpretation. It does not appear that further notice and public procedure would make additional information available to the Department. These standards and rules of practice should be made effective as soon as possible.

Accordingly, pursuant to the administrative procedure provisions of 5 U.S.C. 553, it is found upon good cause that further public rule making procedure with respect to the foregoing provisions is unnecessary, and good cause is found for making these Standards and Rules of Practice effective less than 30 days after publication in the FEDERAL REGISTER.

The reporting and recordkeeping requirements contained in the foregoing have been approved by the Bureau of the Budget in accordance with the Federal Reports Act of 1942.

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